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ARCHAEOLOGICAL NOTES

THE AGORA EXCAVATIONS

THE fifth campaign of excavation in the Athenian Agora continued until June 29. A brief report of the results achieved up to April 20 was published in this Volume of the JOURNAL, pages 173 to 181. An account of the more important discoveries made during the remainder of the season is here presented.

Two large buildings have been for the most part cleared. These are a stoa bordering the south side of the Agora, and a building of theatre type located in the central part of the area. A considerable amount of investigation must still be made in connection with these buildings, but their structural character is now fairly well determined.

The "South Stoa" is a building measuring 150 m. long by 18.30 m. wide that borders the south side of the Agora with space at either end only sufficient for the passage of the two main roads. Its orientation is east to west, and it thus lies at a right angle to the Stoa of Attalos from which it is separated by a space of 25 metres. Although only the foundation stones of red conglomerate have been generally preserved it has been possible to make a tentative reconstruction of the building. This presents a peripteral structure with seventy-three columns on each side and with nine at each end, spaced with an intercolumniation of about two metres. Between the colonnades is a series of twenty-three columns or piers that are joined by walls. Of the superstructure only part of the east end is in place, consisting of three lower drums of unfluted Doric columns standing on the stylobate. They are made of poros which is covered with a heavy coat of stucco. It is surprising to find a superstructure of poros on this stoa, but since this has now been proved it will be possible to associate with the building various poros architectural members that have been previously found in the vicinity of the Stoa of Attalos.

The date of the construction of the building is fixed in the Hellenistic period by the objects found in the filling of its interior space, and by pottery, lamps, and coins from the footing trench of its foundation walls. The latest coin, one of the Athenian cleruchy of Delos which must be dated after 166 B.C., brings the time of construction close to the middle of the second century B.C., and thus makes the building about contemporaneous with the Hellenistic Metroön on the west and with the Stoa of Attalos on the east. It was destroyed in the latter part of the third century A.D., and subsequently, some time after the middle of the fourth century, the site was used for the location of an elaborate system of baths that were fed by a stream of water still abundantly flowing down from the southeast. It has not yet been possible to identify this stoa with any building mentioned by ancient writers and it has, therefore, been provisionally called the "South Stoa."

The theatre, lying just north of the stoa, is a rectangular building with poros foundation walls measuring 52.50 by 42.50 metres. Its orientation is north and south with the front on the north side. The north wall is 10 metres south of the façade of the Giants, long familiarly known as the "Stoa of the Giants," and the

south wall is set against the terrace wall of the South Stoa. The orchestra, which is less than a semicircle, has retained almost intact its marble pavement, constructed of pieces of varied colors interspersed to form simple decorative patterns (Fig. 1). A cutting in the floor slightly off the centre line may mark the place where an altar or a monument base originally stood. Several marble seat blocks are preserved in place in the cavea, but otherwise there remain only the cuttings in the bedrock from



FIG. 1.—VIEW OF THE ORCHESTRA FROM THE EAST

which the seats have been removed. The highest preserved cutting for a seat is for one in the sixth row. The bedrock foundations for the stage are 1.10 m. above the level of the orchestra floor. Entrances opened into the orchestra from the east and west at the northeast and the northwest corners.

The floor of the orchestra was covered by a stratum of burned debris ranging in depth from 15 to 75 centimetres, which in turn was overlaid by a hard deposit of brown earth of the Roman period. Seventeen coins from the undisturbed burned layer have been identified in spite of the damage to their surfaces from the fire. They include ten coins of the Greek period and seven Roman pieces of which the latest are two of Gallienus. The depth of the burned deposit and the extent of injury to the marbles indicate a violent conflagration.

No exact evidence for the date of the construction of the building was secured, but its approximate period, the first century A.D., can be determined from the methods

of construction, from stamped roof-tiles, from two marble heads found on the floor, and from the style of some of the architectural members. It was destroyed by fire in the third quarter of the third century, for the latest coins from the undisturbed burned stratum are those of Gallienus, 253-268 A.D. The general destruction in the Agora that occurred at that time may have been due to the invasion of the tribe of the Heruli in 267. In the latter half of the fourth century another building with the Giants on its northern façade was erected on the earlier foundations. Thus the chronological vicissitudes of the theatre closely agree with those of the South Stoa.

The problem of the identification of this theatre building is an important one. On the evidence of Pausanias and of other ancient writers only two buildings of theatrical type may be considered as possibly located in this part of the Agora, the Orchestra and the Odeion. The new building has not a shape suitable for the Orchestra in which the statues of the Tyrannicides were still standing in the second century A.D., and no trace of the statues or of their bases appeared. The shape, however, is appropriate for the Odeion. After leaving the Tyrannicides, Pausanias mentions the Odeion and says that it is near the fountain house, Enneakrounos. Although the new building is separated by the South Stoa from the fountain house in the southwest part of the Agora it is not far distant from it, and because of its location and of its shape it may be provisionally identified as the Odeion.

Two discoveries made in the excavation of the building favor the proposed identification. Pausanias states that the Odeion contained a statue of Dionysos "worth seeing," and that in front of it were erected statues of the Ptolemies. A statue of Dionysos was actually found lying on the east side of the building and near the front of it was secured a part of a marble base with a dedicatory inscription bearing the name Philadelphos. This is undoubtedly to be restored as Ptolemy Philadelphos and is presumably from the base of one of the statues mentioned by Pausanias.

The ground plan of the ancient buildings of the Agora as they appeared at the close of the season is shown in Figure 2. A comparison of this plan with that published in the *JOURNAL*, page 175, Figure 2, graphically illustrates the topographical progress of the work during the current campaign. The land designated for excavation in the next season lies north and northeast of the Odeion, south of the South Stoa, and in the southwest corner of the area.

In addition to the Mycenaean and Geometric graves mentioned in the earlier report, other burials were uncovered. One that is significant for the ethnological history of Athens belongs to the Neolithic period which must be dated prior to 3000 B.C., and is the earliest record of habitation on the site of the Agora that has so far appeared. A circular cutting, 90 cm. in diameter, had been made in the bedrock, 2 metres east of the façade of the Metroön. This shaft extended down to a depth of 3 metres, so that its bottom is 6 metres below the top of the foundation for the steps of the Metroön. Opening from the bottom of the shaft a rectangular chamber is cut in the rock which contained the bones of an adult in crouching position and two vases.

The vases (Fig. 3) are very primitive in type: One that was lying near the head of the skeleton is a deep hand-made bowl of coarse clay that was fired to a gray color. A curious fact about this crude bowl is that it was mended in antiquity, as is proved

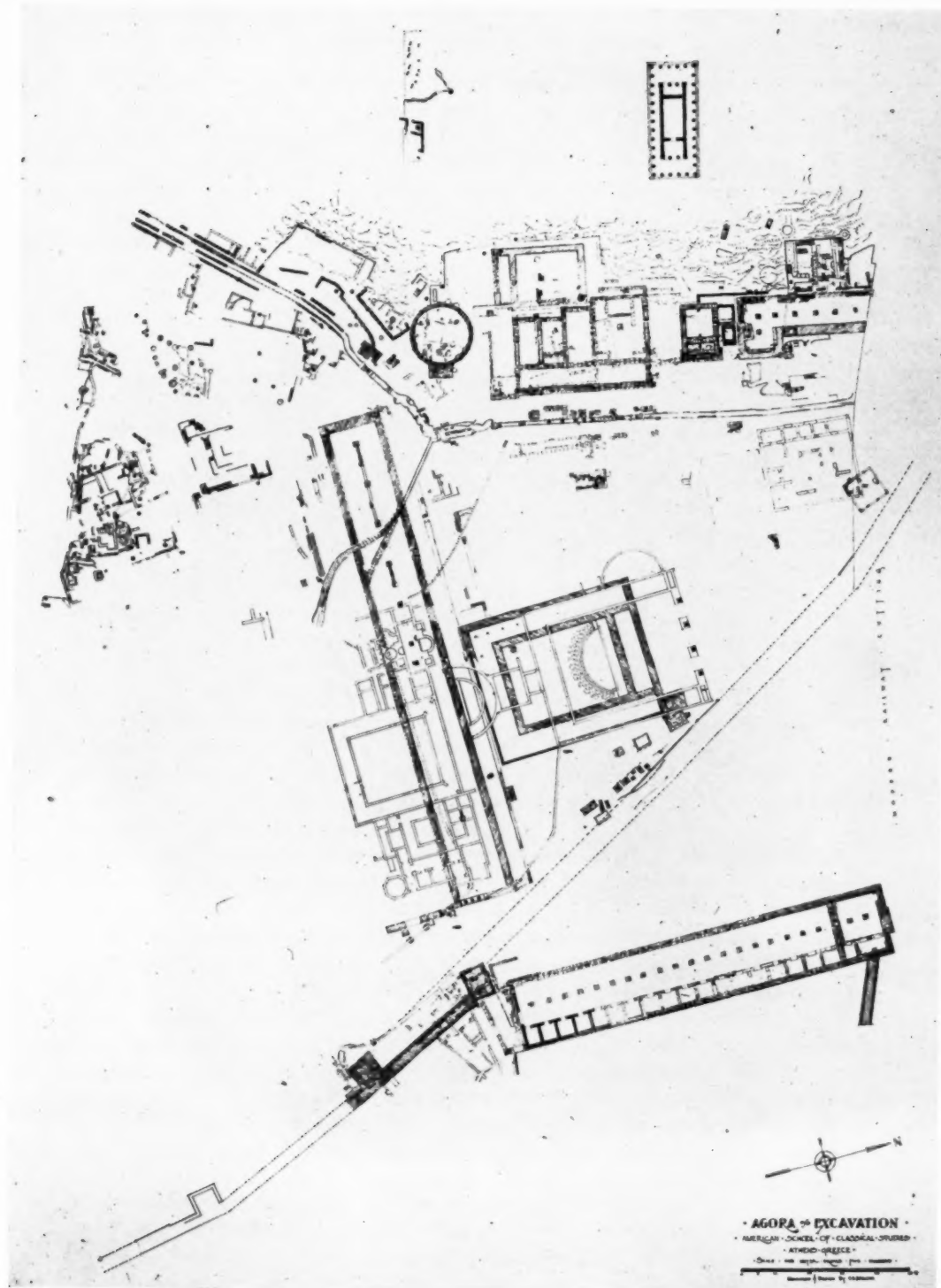


FIG. 2.—PLAN OF THE AGORA AT THE CLOSE OF THE SEASON

by the presence of three pairs of holes along the edges of a fracture. The second vase, which lay at the foot of the grave, is a hand-made two-handled cup that is black on the inside and reddish orange outside. These vases are obviously different from Early Helladic ware and they are placed by Mrs. Leslie Walker Kosmopoulos, a specialist on prehistoric pottery, just before that period and thus at the close of the Neolithic age.

The shaft contained clay, many stones, an obsidian arrow point, and sherds of pottery, among which were pieces of gray Minyan and of matt-painted ware of the Middle Helladic period. A great deal of water flows into the shaft, and it is possible that the Middle Helladic people, knowing nothing of the earlier grave at the bottom, used it as a well before it was filled up. Much has been said by ancient and modern writers about the autochthonous inhabitants of this land before the advent of the Greeks. The skeleton of one of them, that has now been found and has been transferred for study to the Museum of Natural History in New York, should provide valuable information as to the physical characteristics of this indigenous race.



FIG. 3.—NEOLITHIC VASES

Another important discovery is an unroofed grave of the Protogeometric period, ca. 1000 B.C., that was uncovered on the plateau south of the "Theseion." There the bedrock is covered by a shallow deposit of hard packed earth ranging in depth from 30 to 40 cm. When this earth had been removed numerous rectangular cuttings appeared in the bedrock. Since one of these cuttings contained the Protogeometric grave and since sherds of the same period were scattered over the area, it is quite certain that these shafts are the remains of a cemetery of that period which was located on the crest of the hill. The conspicuousness of this site, which must have been constantly frequented throughout the ages and which is now used once a week as a public market, very naturally led to the pillage of the graves and to the scattering of their contents. It is a marvel that one of the graves should have escaped the hand of the plunderer and should have lain untouched for three thousand years just beneath the feet of innumerable passersby.

The grave was cut in the rock in a direction from northwest to southeast. It contained the skeletons of two children, one placed above the other, with their heads at the southeast end. On and about the upper skeleton were deposited twelve vases, and in the earth above the body the presence of carbonized matter and of bones of animals indicates a burnt sacrifice at the funeral. The vases, which are intact, are decorated in characteristic Protogeometric style (Fig. 4). Most of them are of a small size appropriate for the use of children. Four of the jugs, illustrated in the top row of the photograph, bear on the shoulder the usual Protogeometric design of concentric semicircles, but in two cases an uncommon decorative element appears in the shape of a leaf design between the circles. Equally characteristic of the period are the

patterns on the cups that consist of squares or rectangles of cross-hatching and of checker-board type.

Occasional pieces of pottery of this epoch have been found scattered in various parts of the area, but this is the first time that a complete unrifled grave has been uncovered. The remainder of the plateau will be excavated in the next season and a farther extension of this early cemetery may then be revealed.



FIG. 4.—VASES FROM A PROTOGEOMETRIC GRAVE

Besides the many complete vases secured from unrifled graves, pottery in more or less well-preserved condition was found in abundance elsewhere in the excavations, in wells and cisterns and in disturbed deposits. Many different periods are represented by ceramic masterpieces, and even works from the hands of the famous Attic potters are not lacking. One well of the early Geometric age produced an object of special interest. The mouth of the well, that is cut in bedrock, lies 6 metres below modern level and the well itself extended to a depth of $5\frac{1}{2}$ metres. The filling contained a great quantity of sherds which will presently be fitted together to form numerous complete vases. Two were found practically intact at the $3\frac{1}{2}$ m. level, of which one is a large black-glazed oenochoe of a familiar type (Fig. 5). In the same stratum was lying a pendant made of blue glass, of which the obverse side is illustrated in Figure 6 from a water-color painted by Piet de Jong. The head of a woman is represented who wears a heavy wig that hangs down on each side completely framing the face. The face is long and narrow, the eyes are mere slits, the cheek bones are high and prominent, the mouth is small, and the neck is encircled by two rows of



FIG. 5.—EARLY GEOMETRIC OENOCHOE

FIG. 6.—GLASS PENDANT FOUND WITH
EARLY GEOMETRIC POTTERY

beads. External evidence for the chronology of Geometric pottery is badly needed, and a discovery like this offers hope of light on the problem. The type of object and its material point to an eastern origin, perhaps Phoenician or Syrian, but no parallel has yet been suggested that might be helpful in determining definitely either its source or its date.

The investigation of the plateau south of the "Theseion" led to the opening of a large cistern that is cut in the solid rock and is lined with a thick coat of stucco. The diameter of the mouth is 1.05 m. and its depth is 4.70 m. It was packed with stones and earth through which the ancient objects were scattered, but it did not contain water. The contents are varied in character and represent a long range of time, as is indicated by the dates of the coins which extend from the fourth century B.C. to the reign of the Emperor Constantius II, 323-361 A.D. Nothing later than the time of Constantius appeared in the deposit. The objects, of which forty have been catalogued, include a marble herm, two ivory statuettes, the lower part of a marble statuette of Herakles, Roman lamps of the second and third centuries, heads of terracotta figurines, twenty-two lead seals, and several bronze statuettes. The fragile ivories and the bronzes are well preserved because of the dry condition of the earth in the cistern.

The marble herm is also in excellent condition (Fig. 7). The monument is of the usual type consisting of a tall shaft of Pentelic marble which is set on a base and is crowned by the bust of a man, whose name is written across the face of the shaft at the top: Moiragenes son of Dromokles, of the Deme Koile, Eponymos of the Tribe Hippothontis. The head is a splendid portrait of an elderly man of Roman type. The face is clean-shaven, and the tightly compressed lips are indicative of the determined will of the subject of this successful character study. The style of the



FIG. 7.—HERM WITH THE PORTRAIT
OF MOIRAGENES

workmanship suggests a date in the second century A.D., which would also be suitable for the shapes of the letters with which the name is written, but the man is not otherwise mentioned in ancient records.

The two ivory statuettes from the cistern (Fig. 8), which are delicately and beautifully wrought, are of similar type and style and were made by the same hand. They represent seated women; the one on the left of the picture (height: 0.057 m.), whose arms are missing, is facing forward with her head slightly inclined to her left side; the other is seated sideways with the upper part of the body turned to her left where she is holding a large lyre. Her head is bent forward as if she were listening to a struck chord. The heads are of Praxitelean type with placid and reposeful features; the garments are a chiton that is fastened by a high girdle, and a cloak that is wrapped around the lower part of the body. Since one of the figures holds a lyre it is probable that both statuettes represent Muses, and the one with the lyre is reminiscent, in style and costume, of the seated Muse on the Mantinea base. The style of the figures, the type of the garments, and the fine quality of the workmanship tempt one to date them in the fourth or third century B.C., and as several Greek coins were found in the cistern there is no external evidence based on context that would necessitate a later date. A small hole at the back of the seat of each figure indicates that they were attached as decorations to some large object. Perhaps all nine Muses, made in the same exquisite style, were set up in an aediculum, or were used as ornaments along the top of a lyre.

Shallow cuttings in the bedrock of the plateau south of the mouth of the cistern yielded sherds of pottery of the Greek and Roman periods and various other objects including a bronze dicast's ticket of the fourth century B.C., a statuette of Herakles made of red marble, and a marble head of a woman. This head, which is illustrated in Figure 9, is charming in its type and excellent in its technique. A young woman is portrayed with calm and expressionless features. The hair is



FIG. 8.—IVORY STATUETTES

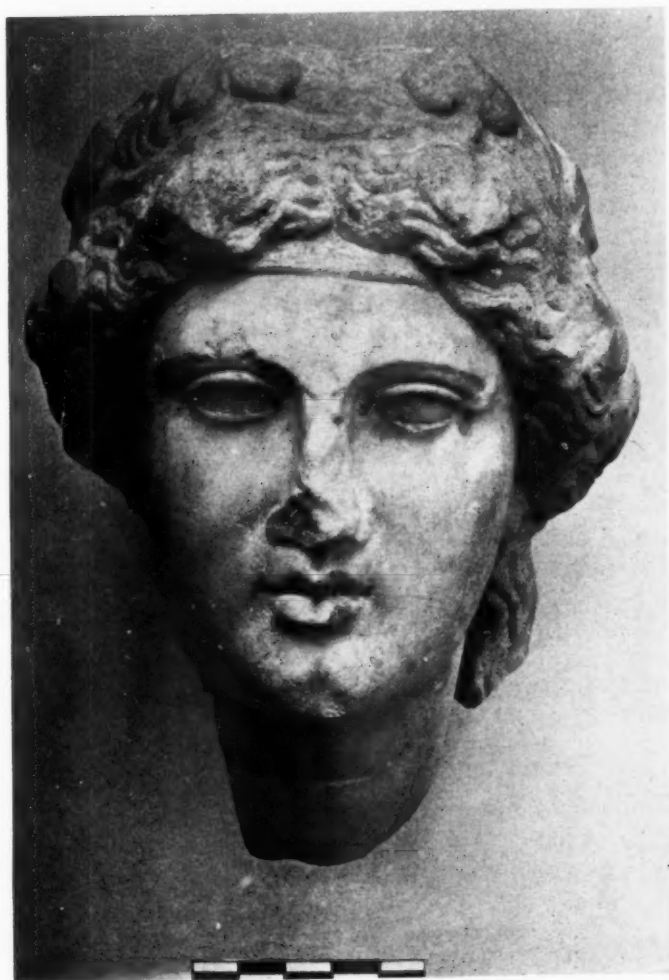


FIG. 9.—HEAD OF MAENAD



FIG. 11.—PORTRAIT OF AN EMPEROR

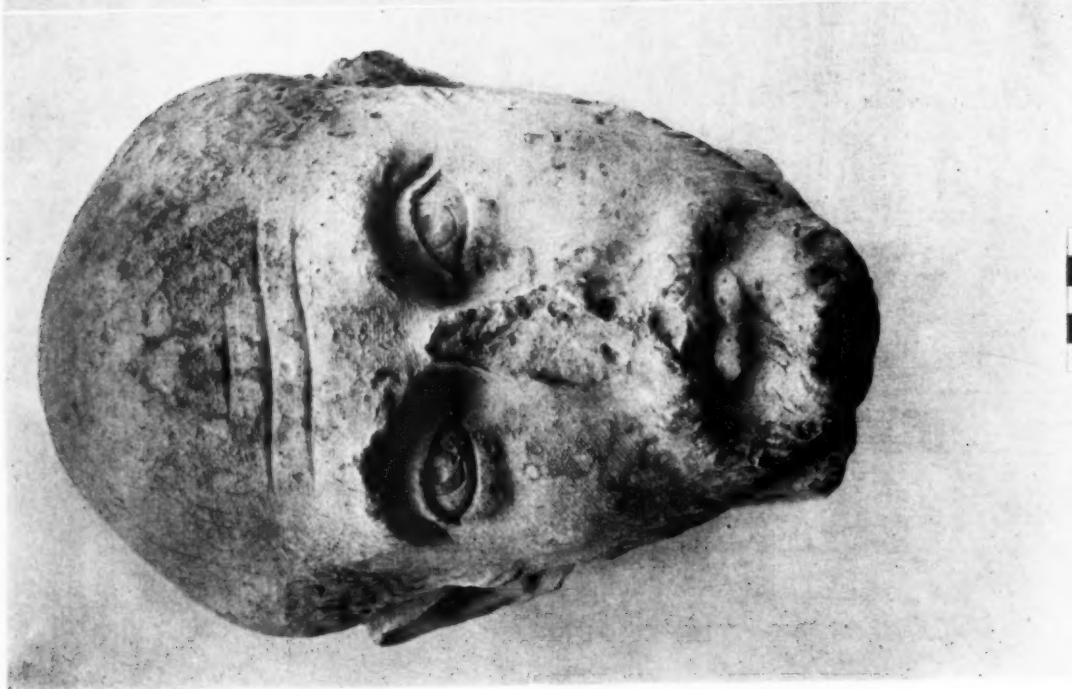


FIG. 10.—MARBLE PORTRAIT HEAD

brushed back in waves from a central parting and is drawn into a knob at the back, from which curls fall on the neck. The eyes are long and narrow and have sharply cut lids; the mouth is small, and the cupid-bow lips are slightly parted. The surface of the Pentelic marble is carefully finished but it is not polished. The fact that the head is crowned by a garland of ivy would seem to indicate association with the cult of Dionysos, and the woman has, therefore, been tentatively called a Maenad, one of the attendants of that god. The style of this handsome head and the technical excellence of its execution justify its assignment to a date in the fourth or third century B.C.

Among the other discoveries in the field of sculpture two portrait heads of the Roman age may be selected for illustration. One of these is a very characteristic portrait of a middle-aged man (Fig. 10). The semi-baldness of the head reveals the conical shape of the skull and emphasizes the long narrow face. The furrowed brow, the incised pupils of the eyes, the gaunt cheeks, and the individualistic manner of trimming hair and beard add to the realism of the picture. A man of serious character is here portrayed, a man of thought rather than of action, a scholar rather than a soldier. On the evidence of style a reasonable date for the work would be in the latter part of the second century A.D.

Another excellent portrait is a life-sized head of Pentelic marble which is well preserved except for injuries to the chin and to the tip of the nose (Fig. 11). The head is wreathed by a crown of laurel behind which the surface has been left smooth, an evident sign that the hair had been painted. The face is clean-shaven, and there are deep furrows between the eyebrows and slight wrinkles in the forehead. Because of the absence of hair the artist has had an opportunity to do full justice to the fine modelling of the cheeks and to the rendering of the strong mouth. The head is presumably to be dated in the second or third century A.D. The presence of the laurel wreath indicates that this is the portrait of an Emperor, and the head does, in fact, somewhat resemble the portrait of Valerianus I that appears on the coins. Identifications of ancient portraits, however, are notoriously doubtful, and the resemblance mentioned must be regarded merely as a tentative suggestion.

This summary of the results accomplished in the latter part of the campaign may be fittingly concluded by a statement of the total number of objects in various categories in the Agora collection catalogued by the end of the season. These are the following: Bronzes, 259; Inscriptions, 3058; Lamps, 1921; Pottery, 6208; Sculpture, 599; Stamped Amphora Handles, 4648; Terracottas, 940; Coins, 41,290. Although these figures by themselves have little significance, they at least indicate the broad scope of the work.

T. LESLIE SHEAR

PRINCETON UNIVERSITY

THE HERMES DIONYSOPHOROS FROM MINTURNAE

To Italian collaborators has been assigned the eventual formal publication of the sculpture found in the excavations of the University Museum at Minturnae, Italy. In the meantime, Comm. Amedeo Maiuri has kindly given me permission to bring briefly to the attention of professional circles one of a group of small statues found in the theater at that site. I am not qualified to present sculptural criticism but the circumstances do not recommend that I delegate this task to another.

The ten preserved fragments were found on May 18th and following, 1933, at the west end of the scene of the theater, in the section of the excavations directed by my assistant, Dr. Immanuel Ben-Dor. When put together by Giulio Formati, who was borrowed for the purpose from the Museo Nazionale at Naples, they formed a small statue, almost complete with its base plaque, totalling 0.97 m. high and representing Hermes carrying the child Dionysos (Figs. 1-2). Its superficial resemblance to an already well-known statue enables me to condense my description to its barest elements; we may list the instances in which the Minturnae version differs from the Hermes Dionysophoros at Olympia.

MINTURNAE

Weight of Hermes on right leg
Added support provided by tree-trunk flanking Hermes' right leg to upper thigh

Right arm held down along flank
Right arm holds small kerykeion
Child Dionysos sits in left hand of Hermes (N. B.: this left hand is badly out of drawing in consequence)
Child Dionysos holds bunch of grapes in left hand, clasped to body
Added support to weight of Hermes' left arm and the child provided by ungainly strut to hip
Wings in hair of Hermes just above forehead

Barefoot
Back well finished

OLYMPIA

Weight of Hermes on right leg, but balance shifted slightly toward tree-trunk
Added support provided by tree-trunk (partly masked by drapery) under Hermes' left fore arm, and strut from tree-trunk to Hermes' left hip
Right arm raised
Missing
Child Dionysos sits on left wrist of Hermes, leaving his hand free. The attribute once held in this hand, if any, is missing
Missing
Added support to weight of Hermes' left arm and the child provided by tree-trunk as above
If wings existed they must have been of metal, attached. The preserved traces of something attached to the hair have frequently been referred to a wreath
Sandals
Back unfinished

Missing fragments: Hermes' right forearm and hand with lower part of kerykeion; toes of Hermes' left foot and part of base plaque; right arm (the hand is preserved, attached to Hermes' left shoulder as in the Olympia Hermes) of the child Dionysos; one short section of strut. In addition there are a few minor surface contusions.

The face of the child has been obliterated and its chest and feet severely granulated by the action of fire.

Restorations: The missing section of strut; the missing portion of the base plaque.

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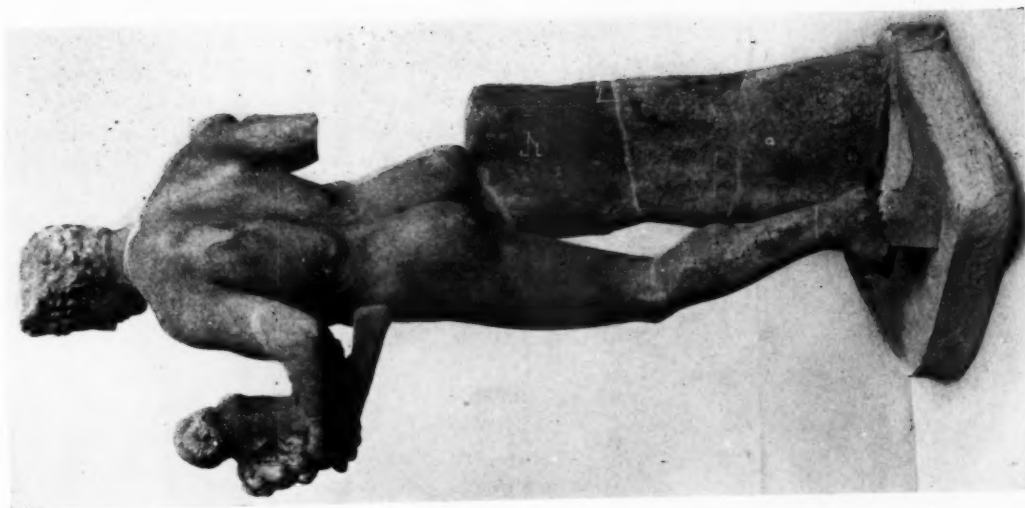


FIG. 1.—THE HERMES DIONYSOPHOROS FROM MINTURNÆ



FIG. 2.—DETAIL OF THE HERMES

Undoubtedly it may be argued (a) that this piece is copied, or closely adapted, from the original *Hermes Dionysophoros* of Praxiteles as well as (b) that it is derived from a completely distinct original. It may also be considered a casual adaptation of dubious value. I do not wish to go irrevocably on record in favor of any one of these proposals over the rest. I am struck, however, by the factor of the tree-trunk supports in both the Olympia *Hermes* and the Minturnae version. Both these statues may be explained satisfactorily as copies from a single bronze original which had no need of tree-trunks, struts or other added supports. To my mind this is sufficient to explain the differences of detail and there is no need to adduce another original. It seems certain in any case that the Minturnae version was not copied directly from the Olympia *Hermes* because no copyist could have avoided adopting the support there executed with such brilliant success: the tree-trunk supporting the left arm, partly hidden by the cloak thrown carelessly over it.

The redecoration of the theater of Minturnae for which this copy was made will be described by Comm. Maiuri who has consented to publish the theater. My premature guess as to this date and thus to the date of the accompanying sculpture indicates some time within the second century A.D.

JOTHAM JOHNSON

UNIVERSITY MUSEUM
Philadelphia

A RECENT ACQUISITION OF THE UNIVERSITY MUSEUM, PHILADELPHIA

THE University Museum has recently received as a "permanent loan" from Memorial Hall the stamnos of Figure 1. The vase was once in the collection of Joseph Bonaparte and presumably was acquired by him while King of Naples. On his departure for France, he gave it to Dr. Nathaniel Chapman after whose death it was acquired first by Edward S. Clarke and later by Dr. Francis Lewis, who presented it in 1899 to Memorial Hall. The vase is preserved intact, and its surface shows scarcely a blemish.

The obverse picture of the vase (Fig. 1A) was published in the *Bulletin of the Pennsylvania Museum*,¹ and reproduced in this JOURNAL for 1907,² but not until Beazley's visit to America was the stamnos attributed to the Kleophrades Painter.³ The reverse (Fig. 1B) is published here for the first time.

The lines of the obverse picture are "grandly flung." The artist has used all the space afforded by the stamnos to lay out a drawing which achieves something of the greatness of monumental sculpture. On the extreme left, Herakles' foot is pressed against the handle of the vase as if to get a purchase for the mighty thrust with his head which bends back the lion's leg and keeps him from clawing. The upper right-hand corner of the field is filled with the curving tail of the lion while in the space above the combatants are the accessories of the picture, the huge club, the quiver, the tree, and the retrograde inscription, ΚΑΛΟΣ ΕΙ. The massive shoulders, the large thighs, the biceps of the hero and the impotent leg of the lion are well drawn and impart a sense of the strain of deadly combat. The lines of the hands and forearms are weaker; neither those of Herakles' left arm which holds the lion down nor those of his right hand which closes off its nostrils are indicative of forceful action.

In the reverse picture of Theseus and the Marathonian bull there is a wealth of sweeping diagonal lines, and impetuous action. Herakles conquers his adversary by superhuman strength and cunning; Theseus springs at his opponent, rains a shower of blows over his head, and will finish the bull with his sword. His hat occupies the upper right-hand corner of the picture, his chlamys the corresponding corner on the left. Between chlamys and club is repeated the inscription of the obverse.

In his latest work on the Kleophrades Painter, Beazley designates our stamnos as later than the two great cups and the two craters which form the starting-point of his discussion. These vases he assigns to the first decade of the fifth century; our vase would thus fall probably within the next decade.

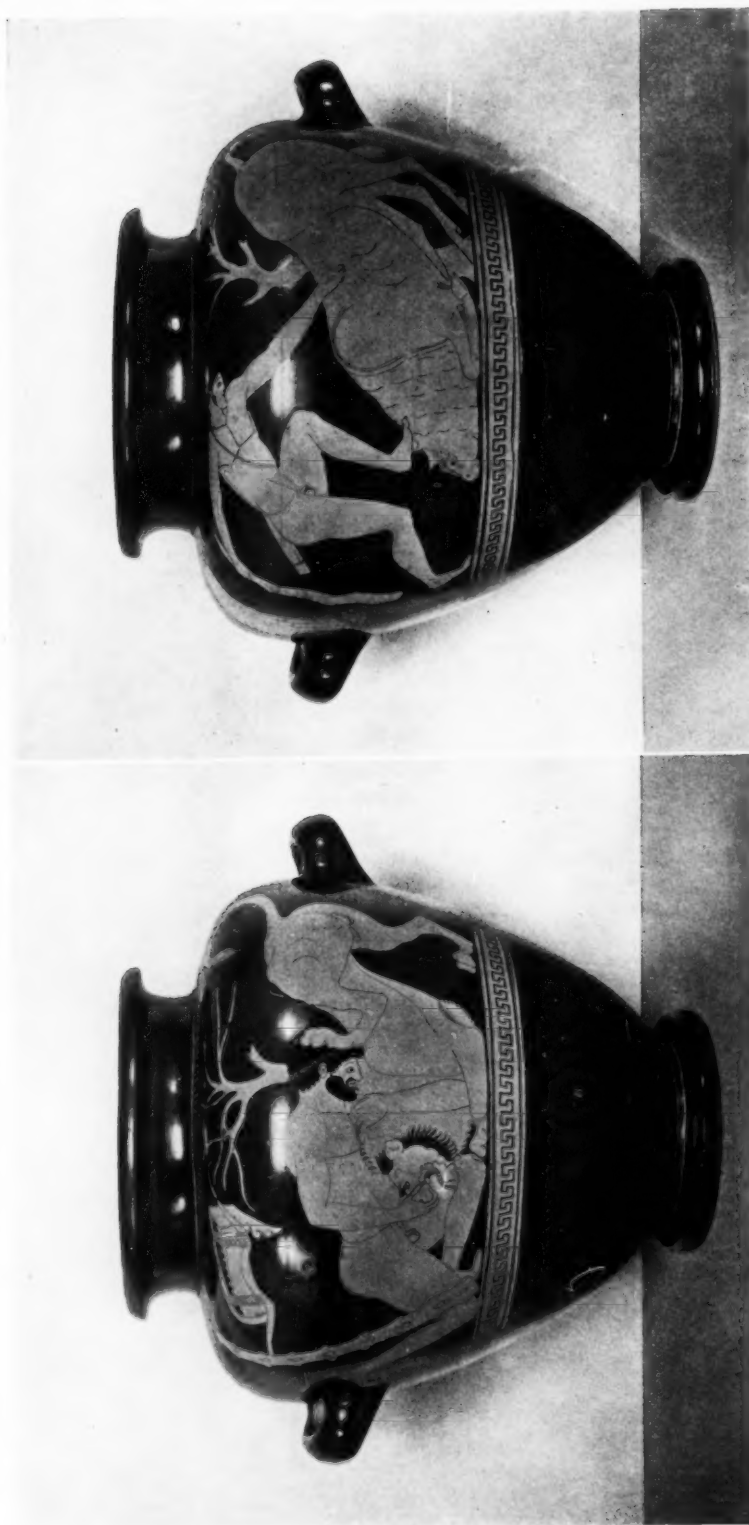
EDITH HALL DOHAN

THE UNIVERSITY MUSEUM,
Philadelphia

¹ 1935, p. 55.

² *A.J.A.*, XI, 1907, p. 119, fig. 10.

³ *Attic Red-figured Vases in American Museums*, p. 43. The vase is no. 37 in the list of the artist's works in *Attische Vasenmalerei*, and no. 48 in *Der Kleophrades-Maler*.



B

FIG. 1.—STAMNOS BY THE KLEOPHRADES PAINTER

A

MONUMENTI DELLA PITTURA ANTICA

A PUBLICATION of great importance is to be undertaken by the Istituto Italiano di Archeologia e di Storia dell' Arte, with the assistance and collaboration of the Direzione Generale per le Antichità e Belle Arti. It is a complete corpus of Ancient Paintings found in Italy comprising not only Hellenistic and Roman works but also Oscan and Etruscan. The title of the work is *Monumenti della Pittura antica scoperti in Italia*. The editor of this vast undertaking is the famous archaeologist, Professore Giulio Emanuele Rizzo, who is the author also of the first two fascicules which have just appeared—*Le Pitture della Casa del Poeta Tragico* and *Le Pitture di Natura Morte*. The authoritative text and the excellence of the plates (two in colors) indicate the high standard which has been set for this distinguished publication (Istituto Poligrafico dello Stato, Rome, 1935).

NOTICE

There existed at Armant till the year 1861 an extremely interesting temple built by Cleopatra the Great in honor of the birth of her son Caesarion. This was completely demolished between the years 1861 and 1863 and the materials were used in the construction of a sugar factory; prior to that date, however, it had been visited and described by many travellers, and, fortunately, a number of drawings, plans, and photographs of it were taken by them. A reconstruction of this temple is being prepared for publication. Information about unpublished descriptions, plans, drawings or photographs of it, or about out-of-the-way published descriptions or records in private collections would be of the greatest assistance. Information should be sent to Sir Robert Mond, Egypt Exploration Society, 200 Euston Road, London, N.W. 1.

A NEW VENUS GENETRIX IN WASHINGTON

OUT of the scores of ancient existing copies of the so-called Venus Genetrix type of statue,¹ not more, I think, than four examples have found their way to North American museums. These are: the Barney copy in the Metropolitan Museum, New



FIG. 1



FIG. 2

STATUETTE OF VENUS GENETRIX TYPE IN THE UNITED STATES
NATIONAL MUSEUM, WASHINGTON, D. C.

York,² a Graeco-Roman work, headless, armless, and discolored by fire, but of delicate execution and perhaps close to the original; a large fragment in the Art Institute

¹ Much information regarding the copies has been collected by Cornelia G. Hareum, *A.J.A.* XXXI, 1927, pp. 141-52.

² Richter, *Handbook of the Classical Collection*, 1930, p. 251, fig. 175.

of Chicago,¹ comprising the portion from the waist to the knees; a good, somewhat voluptuous copy in the Museum of Fine Arts, Boston;² and an excellent replica in the Royal Ontario Museum of Archaeology, Toronto, Ont.,³ which looks as though it may have been executed in late Hellenistic or early Roman times. To this brief list may now be added the two-foot statuette here illustrated⁴ (Figs. 1 and 2), which has been recently placed on exhibition at the United States National Museum, Washington, D. C., forming an item of the Alden Sampson loan collection.

The figure is 0.525 m. in height, standing on a base 0.032 m. in thickness, rounded in front and squared at the back. The chief lines of the drapery are similar to those of the Fréjus copy in the Louvre (Fig. 3),⁵ the chiton slipping from the left shoulder and sagging into two major and two minor rolls beneath the exposed left breast. The Washington body is considerably more slender and boyish in its outlines, approaching in this respect the Toronto copy. The feet lack the sandals that are regularly found on the copies.

The statuette was fashioned from six or seven pieces of Pentelic marble; seemingly this was a scarce commodity in the workshop. We see even the phenomenon—rare in so small a work—of the torso being composed of two portions. These are united at a point 0.24 m. above the base; at some time they were forcibly separated and the confronting edges chipped—a defect that has been made good by the use of plaster (see Fig. 2). This is the only restoration on the figure.

The following members and portions are missing: the head; the right arm from the shoulder; the left arm from above the wrist; the little toe of the right foot; loose parts of the drapery to right and left of the body and above the right shoulder.

Dowel holes appear as follows: in the right shoulder stump (0.015 m. in diameter);

¹ Unpublished; mentioned by Furtwängler in his article, "Antiken in den Museen von Amerika," in *Sitzb. Akad. Wissensch. zu München*, 1905, p. 245. The fragment is of Italian marble; about 0.68 m. in length; surface weathered; seemingly dull work at best.

² *Bull. of the Mus. of Fine Arts*, XXVIII, 1930, pp. 82-9.

³ Harcum, *l.c.*, with pl. VII.

⁴ Inv. no. 86.612. I wish to thank Professor Edward Sampson, of Princeton, N. J., and Mr. J. E. Graf, Associate Director of the United States National Museum, for permission to publish the marble

⁵ Alinari Photograph, no. 22752. Cf. Brunn-Bruckmann, *Taf. 423*; Klein, *Praxiteles*, pp. 53 ff., Abb. 3.



FIG. 3.—THE FRÉJUS COPY OF THE VENUS GENETRIX IN THE LOUVRE

on top of the drapery to rear and right of the neck (0.007 m.); on right side, about in line with the navel (0.005 m.). There is also a hole in the centre of the under side of the base (0.017 m.) that contains traces of what seems to be oxidized lead. The stumps of the original dowels show in the neck and the left arm. In the back of the figure, no doubt immediately above the original centre of gravity, is embedded a metal ring, seemingly ancient, which apparently served the purpose of securing the statuette to the wall. The fine preservation of the surface clearly implies that it was long used as an object of decoration, probably in a private residence, shielded from the elements. When the building that contained it was destroyed, it must have been almost immediately covered with earth, as no trace whatsoever of weathering is observable on it. An excellent opportunity is thus afforded for the study of the technological details of the ancient copyist.

That the expectation of the manufacturer of the statuette was that it should be viewed from the front or side only is made abundantly manifest to one who inspects its back (Fig. 2). The rear of the figure is nearly contourless, almost as flat as a board; and even the base has here been squared off. The posterior portions of the chiton and himation have been but sketchily executed with a claw chisel, by the instrumentality of which the marble must have been hacked away very rapidly. As the marks of the chiselling run well round the right side of the body, this side would seem to have been well masked from the spectator. On the front of the chiton, the fine folds, which must have been outlined with extreme delicacy on the original statue, have been executed, sometimes very carelessly, by the aid of a punch. This work appears at its worst on the right side of the chest and the left side of the abdomen, where the reckless movements of the tool have in some places cut the drapery into veritable lozenge-patterns, destroying all sense of realism. The running drill has been used freely in the long folds of the lower chiton, and their ends have been drilled deeply upwards. Most of the surface of the clothing has been roughened into a semblance of textile material by a rasp; the exposed parts of the body are, as usual in such copies, finely executed. The toes, tiny as they are, have some indication of joints, and the nails are clearly outlined.

A strange example of indifference to reasonable accuracy on the part of the copyist is more apparent in the present condition of the figure than it was while it remained intact. I refer to the long, wide groove that is seen (Fig. 1) in the drapery directly beneath the stump of the left arm. About midway down its course is seen the joint in the marble already noted. Now, the upper half of the groove is considerably wider and deeper than the lower; hence, there is no proper coördination of their edges where they come together. Can it possibly be that two workmen were employed, each on his own half of the figure? It is true that the fault would originally have been fairly well, if not altogether, concealed by the outer fold of drapery now broken away. But the wretched bit of craftsmanship that is here revealed is instructive, to say the least, of the unhappy possibilities of mass production.

Inasmuch as figure and base are one, the copyist has utilized as far as possible the support of the drapery on the left side, spreading out the skirt of the chiton considerably beyond the limits seen on the Fréjus copy (Fig. 3). Indeed, he has, in a measure, approached the exuberant treatment which we find on the Vienna adapta-

tion.¹ It is perhaps possible that our copyist has presented us with a free version of this last type, which frankly leans against a supporting pillar. For he has introduced a curious and, of a truth, illogical stance, wherein the left foot of the figure, on which most of her weight ought to rest, is drawn so far to her right that her centre of gravity must come perilously close to losing the support of either foot. But of course the tottery position in which he has left her may signify nothing more than another example of his own blundering.

Such, then, is the Washington statuette, which forms an interesting, if undistinguished, addition to the long list of Venuses of the Genetrix type. That it was executed in the second century of our era can hardly be disputed. When our knowledge of the technical processes of the Roman sculptors is more complete than it is at present, we shall be able to assign a more exact date. Meanwhile, one may perhaps be forgiven for conjecturing that it belongs to the time of Commodus.

A. D. FRASER

UNIVERSITY OF VIRGINIA

¹ Beautifully illustrated in Schrader, *Phidias*, 1924, figs. 284, 286, 290, 291, 292.

A CORRECTION

Further study in the Archivio di Stato at Florence has shown me that my statements in *A.J.A.* XXXVIII, 1934, p. 59, n. 3, should be completed and corrected. Matteo del Teglia, though called *Residente* in the manuscript catalogue of the Archivio Mediceo, was officially *Maestro di Posta di Firenze*, or *di Sua Altezza Serenissima di Toscana*. Only his letters in Arch. Med. 1656 were written to Gondi; those in 3043 were addressed to F. Panciatichi, *Primo Segretario di Stato e Segretario di Guerra*, at that time the highest office in Tuscany. Abate P. A. Conti, to whom the letters in Miscellanea Medicea, Filza 667, are addressed, was the Secretary of Cardinal Medici, brother of the Grand Duke Cosimo III. Alessandro Guasconi was a member of the firm of Guasconi and Verrazzano, Cosimo's bankers in Venice.

JAMES M. PATON

THE LATINS AT HAGIA SOPHIA

PLATES XLVII-XLVIII

IN THE writings of the later Byzantine historians, as also in those of more recent commentators, the Crusaders, the hated Latins of the conquest, are universally execrated as the vandals and despoilers of the Church of Hagia Sophia. Thus Nicetas Choniates, writing in the thirteenth century and describing the capture of Constantinople and the sack of the church, tells how the Crusaders "spared not the house of God nor His servants, but stripped from the great church all its rich ornaments as well as the hangings made of costly brocades of inestimable value. . . . And the holy altar, compacted of all sorts of precious materials, . . . was broken into bits and distributed by the soldiers."¹ That the "destructive rapacity"² of the conquerors was appalling we may freely admit, their immediate aim being loot, yet to maintain that for this reason "the fifty-seven years of the Latin occupation constituted the worst and most dangerous period in the entire history of the church which was saved only by the recovery of the city in 1261 at the hands of Alexius Strategopoulos"³ is certainly not justified by a study of the monument itself. In fact, quite the opposite seems to be the case. This may be inferred from a number of historical sources as well as from archaeological evidence observable in the building as it stands today.

The great church of Justinian was destined from the very outset of its history to be so wracked and jarred by earthquakes as to demand almost continual buttressing and repair. Indeed, from the accounts of Byzantine writers it has been calculated that twenty-seven severe earthquakes occurred in Constantinople from the beginning of the seventh to the middle of the fifteenth century,⁴ while the church itself has been shaken by at least sixteen major shocks since its completion in 537.⁵ The first restoration was that completed by Isidorus the Younger in 563 when four exterior tower buttresses in the form of winding stairways were added, each one apparently backing on the exterior the respond of one of the great nave piers and rising to the base of the dome.⁶ The most extensive buttressing operations recorded, however, were those carried out by Andronicus Palaeologus the Elder in 1317 when the huge unsightly masses, the "pyramids" of Gregory,⁷ at present so conspicuous on the flanks and east end of the church, were piled against the outer walls. The Turks have added to this confusion through the erection of various structures at the southeastern angle of the church and elsewhere and have complicated matters still further by the building of their four minarets. If, then, an impartial judgment of the activities of the Latins is to be attained it is only just as a preliminary to enquire regarding the probable state of the church structurally and architecturally at the time the reputed villain of the piece appears.

¹ Nicetas Choniates, *Historiae*, ed. Bonn, p. 758.

² Lethaby and Swainson, *Sancta Sophia*, London, 1894, p. 143.

³ E. M. Antoniadi, *Hagia Sophia*, Athens, 1907-1909, I, p. 25.

⁴ Joseph von Hammer-Purgstall, *Constantinopolis und der Bosphorus*, I, Pest, 1822, pp. 36-44.

⁵ Antoniadi, *op. cit.*, I, pp. 22-23.

⁶ Cedrenus, *Synopsis*, ed. Bonn, I, p. 677.

⁷ Nicephorus Gregoras, *Byz. Hist.*, ed. Bonn, I, p. 273.

Within somewhat more than two centuries preceding the advent of the Latins, the last major earthquake, a shock of the fifth magnitude,¹ occurred in 989. It threw down the great western arch and a large part of the dome of the church.² The rebuilding by Basil Bulgaroctonus was completed in 995. So far as historical records indicate, this was the last extensive repair and strengthening of the structure to be undertaken until the great buttressing "pyramids" of Andronicus were erected early in the fourteenth century. Yet the fact remains that in the number and average intensity of the shocks which shook the city, the following century, the eleventh, was surpassed in the history of the church only by the sixth.³ Thus in January of the year 1010 an earthquake of the fourth magnitude rocked the city, a shock which in point of intensity had been exceeded but four times in the previous life of the church,⁴ while between the years 1032 and 1041 two quakes of the third and four tremors of the second magnitude were recorded. During the second half of the century there occurred two more severe shocks, fourth magnitude, in 1063 and 1087, and one tremor in 1064. Contrasted with the preceding hundred years the twelfth century was remarkably quiet; only a single quake of the third magnitude was reported, that of the year 1159. From that date until after the conquest and the subsequent expulsion of the Crusaders but one other seismic disturbance was noted, a tremor of the second magnitude in 1231. In face of the foregoing summary of the dangerous terrestrial shocks to which the already impaired fabric of the church had been subjected within the two hundred and fifteen years before the Latin conquest and in view also of the fact that, so far as is known, there were undertaken during that entire period no buttressing operations or any repairs of more than a presumably routine character,⁵ the conclusion seems amply justified that the condition of the church was structurally precarious at the opening of the thirteenth century, perhaps even earlier, before the Latins had ever appeared upon the scene. Bearing this fact in mind we can now turn to a consideration of the archaeological evidence.

From the western wall of the exonarthex project today four great rectangular piers, which carry flying buttresses springing to meet the outward thrust of the vaults of the narthex and of the west triforium gallery (Fig. 1). Between them are now three doorways giving access to the outer vestibule (Pl. XLVIA). This arrangement, however, may not be original, since the piers themselves seem of comparatively late date,⁶ while Salzenberg,⁷ Fossati⁸ and Texier in the first half of the nineteenth century⁹ show the central opening filled by a window, obviously a relic of the period from the thirteenth century onward when this bay was occupied by a belfry. In the centuries before the belfry was erected it seems clear that this axial opening, even today larger and more imposing than the others, served as the grand entrance portal

¹ According to Antoniadi's classification, *op. cit.*, I, p. 21, in which a barely perceptible tremor is called a shock of the first magnitude, whereas that of the sixth magnitude represents the most severe disturbance ever suffered by the city.

² Deacon Leon, *Historiae*, ed. Bonn, pp. 175-176.

³ Antoniadi, *op. cit.*, I, fig. 4.

⁴ I.e., in the sixth, eighth, ninth and tenth centuries.

⁵ Lethaby and Swainson, *op. cit.*, p. 123, quoting from Glycas and Scylitzes, mention that Romanus Argyrus beautified the capitals with silver and gold in 1028.

⁶ Vide *infra*, p. 464.

⁷ *Altchristliche Baudenkmale von Constantinopel*, Berlin, 1854, pl. XII.

⁸ *Aya Sofia*, London, 1852, pl. 16.

⁹ Cf. Lethaby and Swainson, *op. cit.*, pp. 193-194.

of the church, the famed Beautiful Gate,¹ known also as the Propylaeum of the Narthex.² Although the location of the Beautiful Gate has long been disputed and earlier authorities have agreed in placing it at the outer end of the comparatively late vestibule which opens from the southern door of the narthex,³ Ebersolt, through

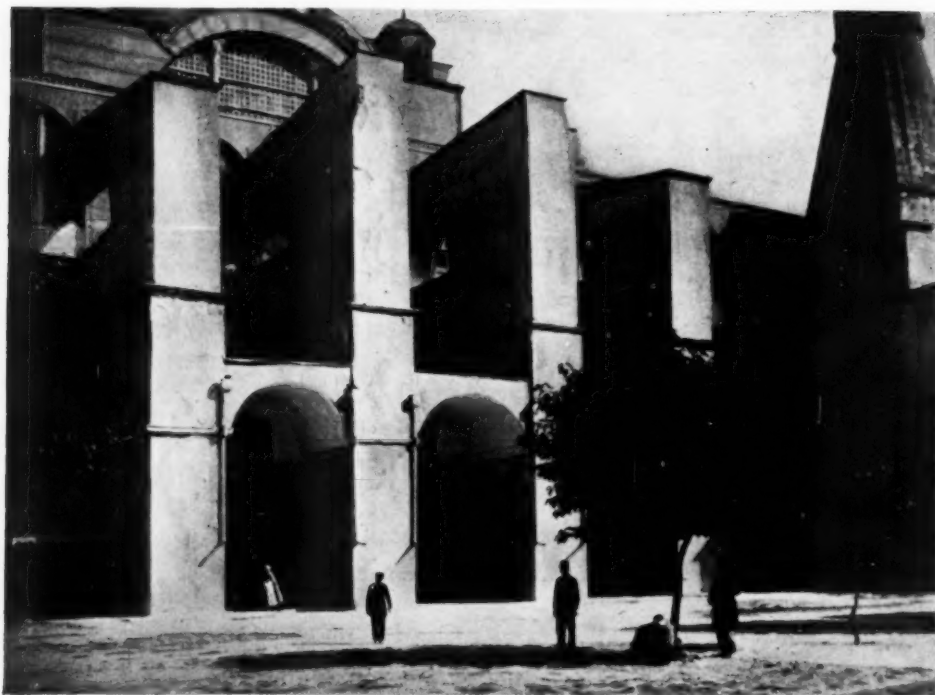


FIG. 1.—WEST PORTALS AND BUTTRESSES OF WEST FAÇADE

a careful study of the routes followed by the emperors as described in the *Ceremonies*, has satisfactorily demonstrated its position and shown that it was perhaps identical with the Propylaeum of the Narthex.⁴

The existence of the belfry alluded to as later displacing the Beautiful Gate is first vouched for in the seventeenth century by Grelot who figures a high rectangular tower at the middle of the west façade and says: "This tower was formerly the belfry of Hagia Sophia but is now quite empty, since the Turks have melted the bells which were in it that they might make them into cannon."⁵ From the information which he gives, it is evident that the belfry was supported on its north and

¹ Ὑπαὶ Πύλη.

² Προπύλαιον τοῦ Νάρθηκος. It is alluded to by Porphyrogenitus, *De Cerim. Aul. Byz.*, ed. Bonn, I, 91, p. 415, as μέγας πυλῶν ἐπὶ τῷ μέσῳ.

³ Lethaby and Swainson, *op. cit.*, pp. 152, 182 (by implication); and Antoniadis, *op. cit.*, I, p. 146.

⁴ J. Ebersolt, *Sainte-Sophie de Constantinople, étude de topographie d'après les Cérémonies*, Paris, 1910, pp. 4-5, 7, and p. 2, note 6.

⁵ Guillaume Joseph Grelot, *Relation nouvelle d'un Voyage de Constantinople*, Paris, 1680, p. 124.



FIG. 2. — HAGIA SOPHIA FROM THE NORTHWEST, AFTER GRELOT

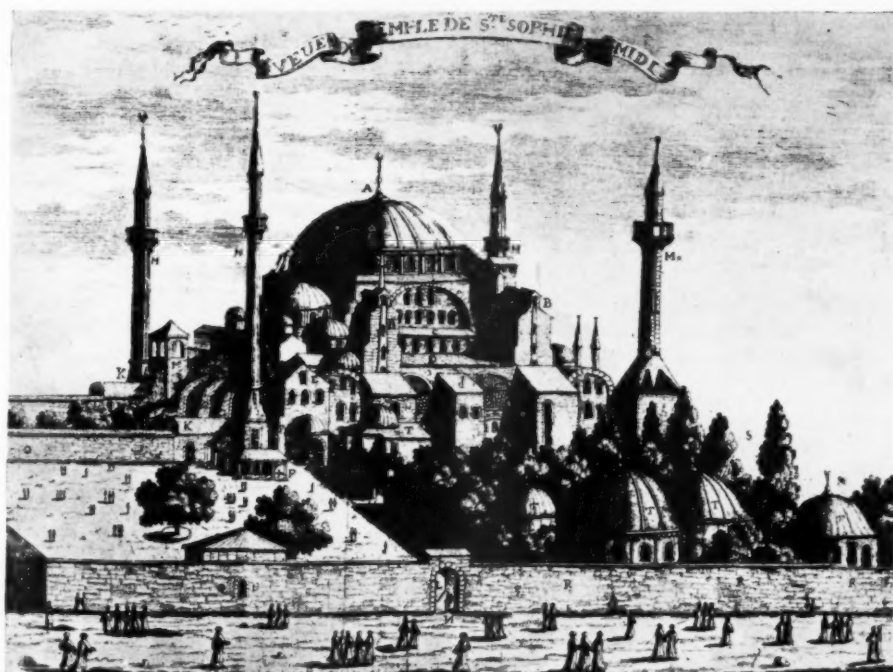


FIG. 3. — HAGIA SOPHIA FROM THE SOUTH, AFTER GRELOT

south sides by the two central buttress-piers (cf. Pl. XLVIA) and that it was fully as wide as these, that it rose as a rectangular tower with an offset near the top, showed arched openings at different levels and was covered by a pyramidal roof. (Cf. Figs. 2, 3, 4 and Pl. XLVII-XLVIII.)¹ "The use of bells," says Goarus, "was first adopted by the Greeks in 895 when Urso Patricio, the Doge of Venice, sent such to the Emperor Michael. The latter, holding them in great esteem, set them up in a tower erected beside Hagia Sophia."² The date given, however, is incorrect, since at that time there was neither a doge of the name mentioned nor an emperor in Constantinople called Michael; but these conditions were fulfilled in 865 when the gift may have been made. But whatever the evidence which may vouch for this Venetian gift in the ninth century, there is no basis for supposing that the bell-tower was erected at this time, the more so since the Russian pilgrim, Antonius of Novgorod, declares in 1200 "there are no bells in Hagia Sophia."³ On the other hand, during the reign of Andronicus Palaeologus the Elder, 1282-1328, and directly upon the heels of the Latin occupation, Pachymeres makes mention of "the bells of the church calling to service,"⁴ indicating that their use had already become general. The theory may therefore be advanced that not only were the bells an importation of the Latins⁵ but that the belfry itself was erected by them, an inference further supported by the unmistakably Romanesque character of the bell-tower as sketched by Grelot.⁶

Because of their magnificent engineering and comparatively gentle slope, the vaults at the west end of the church could have needed no buttressing for many centuries. This conclusion is borne out by an examination of the masonry of the buttresses at present supporting the western walls, their workmanship giving the impression of a

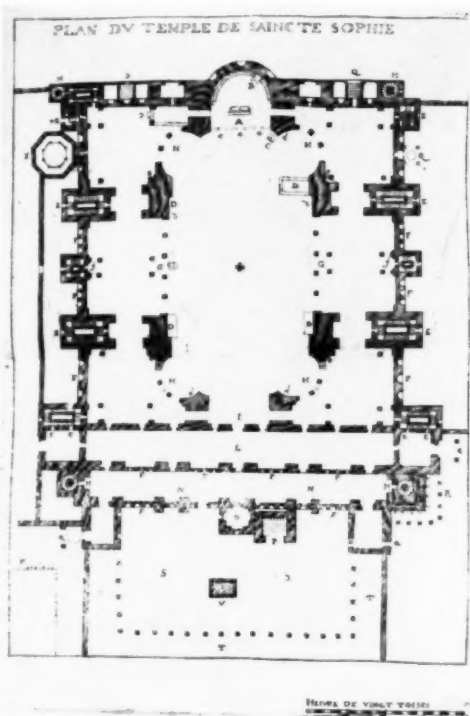


FIG. 4. - GROUND PLAN, AFTER GRELOT

¹ Figures are from Grelot's plates, pp. 127, 243, 109.

² *Euchologium*, Paris, 1647, p. 560.

³ Ebersolt, *op. cit.*, p. 6, note 3.

⁴ Pachymeres, *Andronicus Palaeologus*, ed. Bonn, I, 4, p. 19.

⁵ This is borne out by Grelot's remark, *op. cit.*, p. 132, on the comparative smallness of the belfry: "de cette façon il ne pouvoit pas avoir dedans beaucoup de cloches ny de bien grosses."

⁶ Cf. our figs. 2 and 3. According to Ebersolt, *loc. cit.*, Kondakov thought that the tower might even have been of Turkish workmanship.

fairly late date within the Byzantine period. They are now seven in number (Fig. 5). The five southernmost belong to the type known as flying buttresses, i.e., free-standing, with struts thrown across in the form of half-arches to the adjoining wall (Fig. 6). This type in itself is an indication of late date.¹ The four which stand at the middle of the façade carry double struts, the lower abutting the vaults of the narthex, the upper the vaults of the west triforium gallery (cf. Fig. 1); the two which flank the main axis of the church differ from their immediate neighbors to north and south in that their tops are horizontal rather than inclined outward, while their upper struts are supported at the abutting end by obviously Turkish re-enforcements imparting



FIG. 5.—GENERAL VIEW OF THE CHURCH FROM THE SOUTHWEST

to them the form of pointed arches (Fig. 8). All rise to the same level in the spandrels of the arched triforium windows² and are encircled by carved marble string courses at about two-thirds their height.³ At a lower level they are joined together by tunnel

¹ According to Grelot, *op. cit.*, p. 123, the west wall of the triforium was supported by six flying buttresses, "une demy douzaine d'arcs boutans tout à jour et à mesme distance," and on p. 132 he adds that the west gallery "est appuyé de six arboutans, dans le milieu desquels se voit une tour quarree." On the other hand, his panorama, p. 87 (our fig. 7), actually shows a *seventh* buttress at the extreme north behind the northwestern minaret. Hence it seems probable that there were originally *ten* of these buttresses, one at each end and eight more between the nine windows of the western triforium gallery.

² Ca. 19.80 m. above the ground. Those which incline outward show a drop of ca. 3.30 m. from east to west.

³ The acanthus ornament resembles stylistically that of the column capitals of the nave (cf. Salzenberg, *op. cit.*, pl. XX, figs. 9-11), while the string courses themselves are obviously composed of older fragmentary material (cf. *op. cit.*, folio ed. p. 25).



FIG. 6. — BUTTRESSES OF THE WEST FAÇADE AS SEEN FROM THE SOUTHWESTERN MINARET

vaults which spring from coarsely moulded imposts to form three sheltered porticoes, the central one of which is Turkish work of the later nineteenth century.¹ Of the other buttresses of the façade the southernmost, which rises from the north wall of what was once the south cloister of the atrium, has a single strut with inclined top; the northernmost, likewise with a sloping top, is built up solid and partly incorporated in the wall of the adjacent minaret, while the one next south of it is considerably lower than any of the others. (Cf. Fig. 5 and Pl. XLVIA, B.)

The date at which these buttresses were erected has never been satisfactorily determined although various hypotheses have been advanced. Thus Salzenberg in his restoration² shows the four central piers rising to the height of the triforium gallery and surmounted by equestrian statues,³

but observes that, from their position, they cannot be contemporaneous with the construction of the church, although they are built of old materials. Lethaby and Swainson⁴ show six of the seven flying buttresses indicated by Grelot⁵ (Fig. 7) as already in place in the ninth century, and Ebersolt likewise maintains⁶ that they were erected at this time by Basil I in order to strengthen the great western half-dome then threatening to fall. Antoniadi⁷ suggests that the northern and southern buttresses of the central group of four are the earliest, dating perhaps from 1317, although all belong to this century or the next. In discussing this problem we can at once discard any hypothesis which would date these buttresses to the ninth century for the simple reason that flying buttresses were unknown before the twelfth century and did not come into general use even in France, where they seem to have originated, much before the beginning of the thirteenth. An appreciation of this fact suggests, *prima facie*, that these buttresses, like the belfry, were the work of the Latins.

¹ Cf. Salzenberg, *op. cit.*, pl. XII, and Fossati, *op. cit.*, pl. 16.

² *Loc. cit.*

³ Fossati, *op. cit.*, p. 5, says that the four famous bronze horses of the façade of S. Marco which were brought from Constantinople to Venice in 1204 crowned these piers. They are known, however, to have come from the Hippodrome. Cf. Riant, *Exuviae Sacrae Constantinopolitanae*, 1878, II, p. 274, and Lethaby and Swainson, *op. cit.*, p. 193.

⁴ *Op. cit.*, fig. 29.

⁵ *Op. cit.*, panorama, p. 87.

⁶ *Sainte-Sophie de Constantinople*, p. 6, note 3.

⁷ *Op. cit.*, I, p. 141.

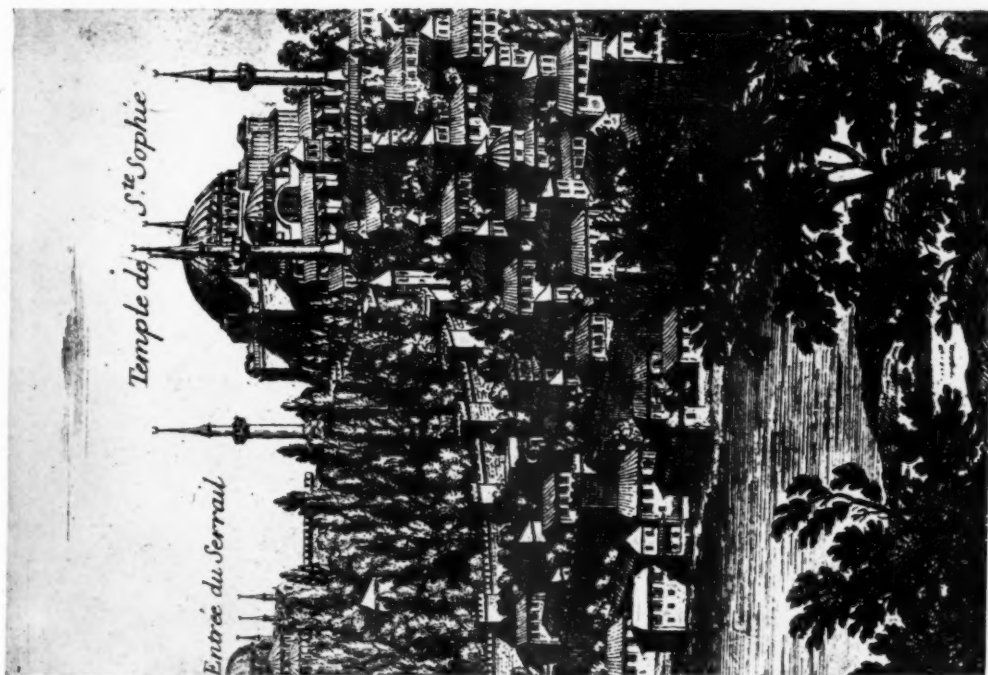


FIG. 7.—HAGIA SOPHIA FROM THE NORTHWEST, AFTER GRELOT'S PANORAMA

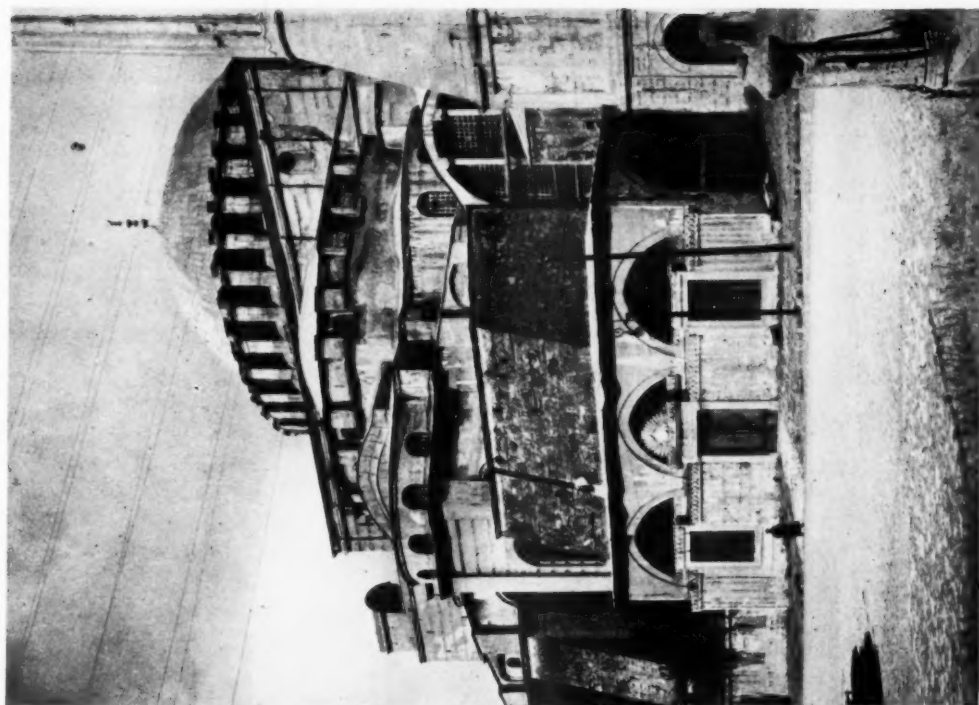


FIG. 9.—HAGIA SOPHIA, EXTERIOR, EAST END FROM THE NORTHEAST

In support of this theory strong arguments can be adduced. First we see that the seven buttresses figured by Grelot (Fig. 7) are of uniform type, their sloping tops impinging upon the spandrels of the west triforium windows. The two central buttresses of the façade, hidden by the bulk of the belfry, the lateral walls of which were formed by their upright piers, were naturally enough entirely overlooked by Grelot, who therefore declares that there were but six, apparently neglecting the one additional example which he himself shows at the extreme north. Nevertheless, a careful examination of these two buttresses reveals that, in essential form, construction and dimensions they are exactly similar to those which flank them, due allowance of course being made for the alterations effected by the Turks when the belfry was dismantled. The Turkish builders, doubtless considering that the struts had been weakened by the removal of the tower, thought to strengthen them by raising their sloping tops to horizontal, supporting the abutting ends upon segments of masonry between the windows, and thus imparting to the upper struts the form of pointed arches¹ (Fig. 8). We may therefore assume, on the basis of the information furnished by Grelot and of a study of the extant buttresses themselves, that the west façade was once re-enforced—like the lateral wall of an early Gothic church—by a uniform range of eight or, more probably, ten² flying buttresses with flat sloping tops and double struts, four embracing the three central bays, two embracing each end bay of the façade and perhaps two others midway between the central and terminal groups. The two buttresses at the center were masked by the belfry which rested in part upon them.³ More significantly, however, the very form and construction of the southernmost buttress of the central group of four, i.e., the only one which still stands presumably intact and unaltered,⁴ are closely paralleled by early Gothic buttresses in the Île-de-France where analogies occur which are too close to be fortuitous,⁵ analogies which had been created not many years before Frenchmen, setting out on the Fourth Crusade, turned aside to capture Constantinople with the aid of their Venetian allies. And even agreeing for the moment with Antoniadis that the two northern and southern buttresses of the central group might represent the work of Greek hands in the extensive re-enforcement of the church in 1317, one finds it scarcely conceivable that, in form and structural principles, they should then have not more nearly approximated the vastly improved and perfected flying buttresses in use throughout western and central Europe at the end of the thirteenth century. We are justified then in concluding that the buttresses of the west façade of Hagia Sophia, like the vanished belfry, were erected between 1204 and 1261, during the Latin occupation; that in their construction earlier materials such as

¹ Cf. Antoniadis, *op. cit.*, I, pp. 141–142.

² Vid. *supra*, p. 463, note 1.

³ This is unmistakable in Grelot's view from the northwest, pl. p. 127 (our fig. 2), in which the entrance to the cistern in the bay next south of the belfry is shown *between* the belfry and the third buttress from the south. Cf. also his plan, p. 109 (our fig. 4).

⁴ In Fossati's view, pl. 16, this is the only one of the four which preserves its sloping top.

⁵ E.g., the flying buttresses of the Church of Saint-Martin at Laon, dating probably in the third quarter of the twelfth century, and those in the apse of Saint-Leu d'Esserent, dating from the last quarter of the twelfth century. The choir of the Cathedral of Soissons shows flying buttresses with double struts at the beginning of the thirteenth century. Cf. C. H. Moore, *Development and Character of Gothic Architecture*, London and New York, 1890, pp. 77–78, 82, and figs. 40, 41, or any standard work on the Gothic style in France.

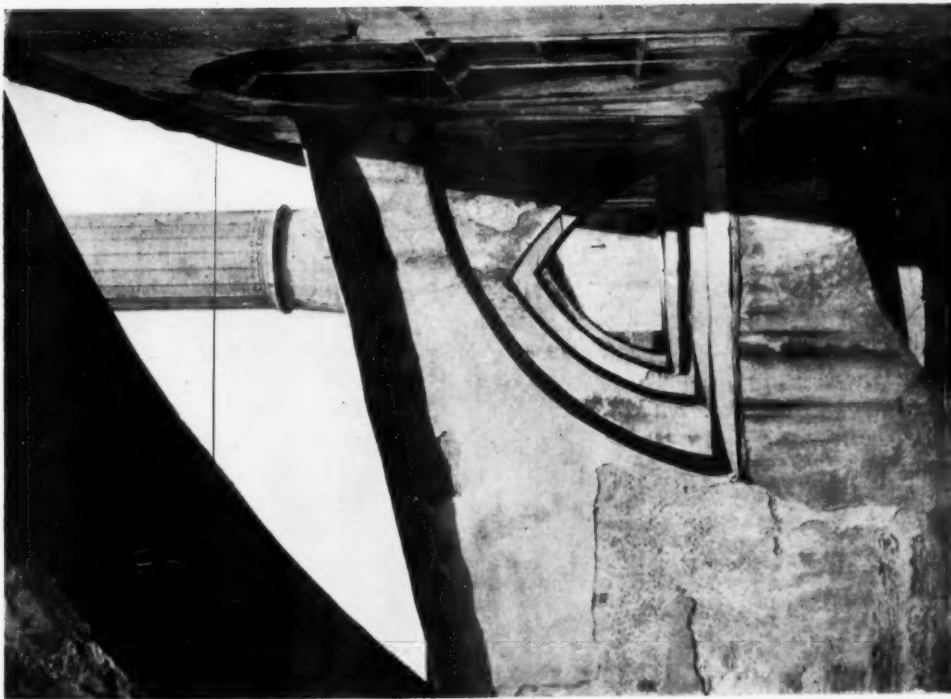


FIG. 8. - THE FLYING BUTTRESSES OF THE WEST FAÇADE, STRUTS AND ARCHES

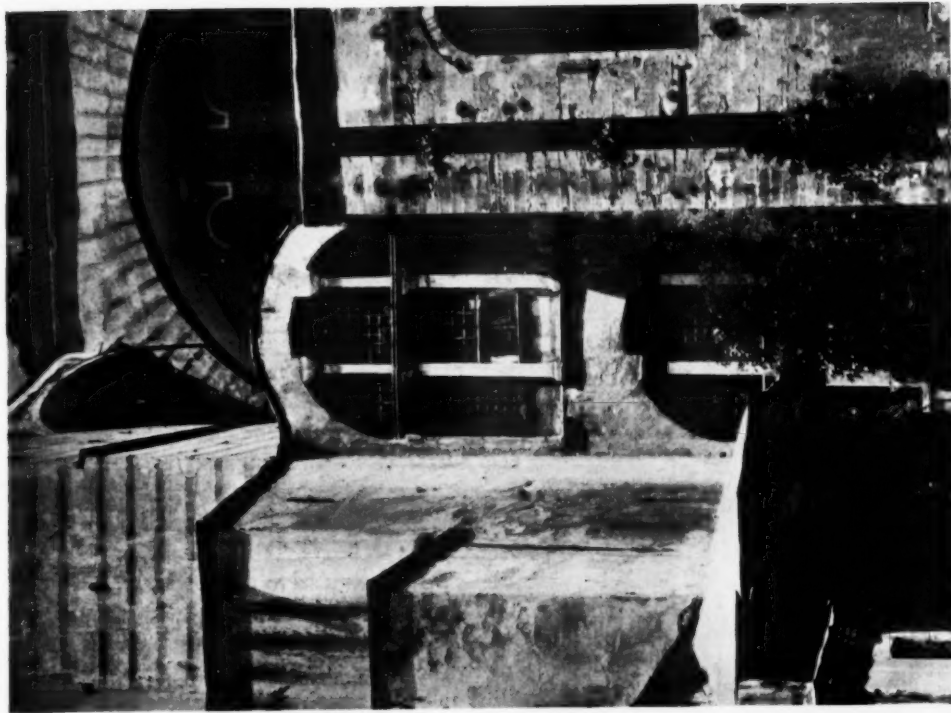


FIG. 10. - SOUTHWESTERN BUTTRESS, SQUINCH AND SOUTHERN ARCH OF DOME FROM THE SOUTH

ornamental string-courses found a place; that they originally numbered eight, or more probably ten, of which five exist in more or less restored or altered form, while one, at least, retains intact its thirteenth century aspect.

In addition to the flying buttresses just discussed, others of the same type, now considerably altered and obscured by incorporation in the ungainly masses erected by Andronicus Palaeologus and later Turkish builders, can nevertheless be clearly distinguished upon the flanks and east end of Hagia Sophia; the existence of still others needed to complete a fully developed system of exterior buttressing may be reasonably inferred.

Thus an examination of the mass of masonry which backs externally the middle of the north wall of the church reveals the fact that it consisted originally of two parallel and rectangular walls¹ projecting at right angles and which in their lower portions back exactly the responds of the two outer columns of the central bay of the north aisle. (Cf. Pl. XLVIIA.) Above the level of the pavement of the triforium, however, they became flying buttresses, their powerful struts impinging upon the outer wall of the triforium between the windows of the bay and at the level of the springing of its vaults. (Cf. Pls. XLVIIB, XLVIIB.) Their sloping tops, their struts in the form of half-arches, their size and massive proportions, as well as the scientific manner of their application exhibit such close and striking analogies to the flying buttresses of the west façade already discussed that there can be little doubt but that, like the latter, they were the work of western builders and were erected during the Latin occupation. At a later date, perhaps under Andronicus, the open quadrants beneath the struts were filled in with masonry in order to provide a solid backing for the responds of the outer columns of the triforium (cf. Pl. XLVIIB), the sloping tops of the two buttresses were united by a tunnel vault of like inclination, and the open end of the chamber thus formed was walled up² with the exception of a doorway³ opening northward off-center and a large arched window at a higher level; another portal⁴ was cut through the western wall. Within the buttress as now constituted an irregular flight of fourteen steps leads upward to the exterior, while at the level of the triforium a wooden flooring has been laid and a doorway cut through to the central bay of the north gallery of the church.

The buttress at the middle of the south flank of Hagia Sophia, like that correspondingly placed to the north, consisted originally of two parallel masses of masonry projecting at right angles⁵ and which, above the level of the pavement of the triforium, became flying buttresses. In form, construction, and abutment of struts they resembled closely the northern pair, except that they were somewhat more massive and that the more easterly of the two did not for some reason exactly back its column-respond but instead was allowed to overlap the aisle window which adjoins it on the east. (Cf. Pl. XLVIIA.) As on the north, the quadrants here also were later filled in, probably by Andronicus, and the solid walls so formed were united and strengthened by means of a tunnel vault which, following the slope of the original struts, inclines sharply downward to the south. Since the fall of the city,

¹ Each projecting 9.42 m., with a width of 2.46 m.

² With a wall 1.25 m. thick.

³ Width 1.62 m.

⁴ Width 2.12 m.

⁵ Each projecting 9.90 m., with a width of 2.50 m.

the buttress has been still further re-enforced and extended southward by the Turks.¹

From the exterior of the eastern wall of the church at the south of the sanctuary apse project two low chambers contiguous one to another, each covered by a sloping double-pitched roof² and now walled up and rendered inaccessible by reason of the two great flying buttresses which emerge from their roofs. Certain indications, such as the blocking up of the small and richly moulded doorway which opened eastward from the *diakonikon*, the partial blocking of the window above this door, differences of material, etc., prove conclusively that these chambers belong to the post-Justinian period but antedate, perhaps considerably, the era of the Latin occupation. The buttresses which rise through their roofs differ from the other flying buttresses on the north and south flanks of the church, not only in that their eastern faces batter sharply, but also in that they are provided with double struts (Fig. 9), one at nave-level, the other rising to the level of the vaults of the triforium (Pls. XLVII A. B-XLVIII A). Their purpose, admirably fulfilled, is to absorb the powerful eastward thrust of the smaller nave-pier south of the bema and the even more dangerous thrust transmitted along the line of the inner ranges of columns of the south aisle and of the south triforium gallery. From the northern flank of the buttress adjoining the apse a buttressing arch is sprung across to the outer angle of the sanctuary (Fig. 9, p. 465). These works, if the re-enforcements already discussed upon the flanks and west front of the church be accepted as of Latin construction, must also be attributed to the latter.

In addition to the buttresses of French Gothic type considered in the foregoing pages, the existence of which is beyond question, there are others for which the archaeological evidence, though less clear, seems reasonably conclusive. Thus to the north of the apse and extending from it to within a few meters of the vestibule, which opens from the east end of the north aisle, a huge rectangular mass of masonry, its eastern face sloping sharply upward, now takes the outward thrust of the *prothesis* wall and of the northern pier of the bema.³ Although apparently built solid, the information supplied by Grelot⁴ as well as certain irregularities in its northern and southern faces (particularly in the former) give reasonable assurance that in its mass are incorporated two flying buttresses similar to those at the south of the apse.⁵ From its south flank, moreover, a buttressing arch is sprung across to the adjacent angle of the sanctuary apse (Fig. 9, p. 465).

Turning once more to the north side of the church, we may observe in the eastern face of the great rectangular block of masonry⁶ which backs the respond of the main northeast pier of the nave the traces of another flying buttress, apparently

¹ Cf. Salzenberg, *op. cit.*, p. 17.

² Their projection eastward is ca. 14.50 m. and their combined width somewhat less; the northern chamber, larger and more lofty than the other, rises to a height of ca. 8.50 m.

³ Its projection is 16.00 m. and its width ca. 14.00 m.

⁴ Grelot says, *op. cit.*, p. 119: "Entre ces deux dernières portes" (i.e., those opening to the east ends of the aisles) "sont les quatres arboutans. . . . Ces arboutans sont continus au mur." Cf. also his plan (our fig. 4).

⁵ Although denying the possibility of incorporated flying buttresses, Antoniadis, *op. cit.*, II, p. 160, grudgingly concedes that it was perhaps not entirely built by Andronicus.

⁶ Its projection is 17.00 m., its width 10.50 m.

similar to those already described at the middle of the north and the south walls. (Cf. Pl. XLVII A, B.) Equally clear traces of yet another flying buttress appear in the eastern face of the massive buttress which backs the respond of the main southeast pier of the nave. This southeastern buttress shows a slight batter on its southern face but in other respects resembles closely the corresponding mass on the north side of the church.¹ Like the latter and the one north of the apse, it should probably be attributed in its present form to Andronicus. As represented in Fossati's plan, its interior is hollow and occupied by ascending stairs, which,² if they still exist, are now inaccessible. Between the cylindrical *skeuophylakion* or sacristy and the extreme northeast angle of the church a series of three buttressing arches one above another³ is thrown across the intervening space, its purpose being obviously to stiffen the responds of the inner angle columns at both nave and triforium level. (Cf. Pl. XLVII A, B.) Although Antoniadis thinks that the type of brick-work here employed indicates an early date within the Byzantine period,⁴ it seems at least possible that, as in other instances, older materials were here reused by the Latins. Of the remaining exterior buttresses about the church which rise from ground level, the huge mass which backs the respond of the main northwest pier of the nave⁵ (Pl. XLVII A, B) does not extend parallel to the lesser axis of the church but inclines considerably to the east. It is largely of stone and apparently built solid, its northern face showing a considerable batter. It very probably incorporates and obscures a fourth flying buttress similar in form and function to the other three along the north flank of the church. It is needlessly bulky and unscientifically placed, since there is no reason why it should have been allowed to interfere with the windows in the next bay to the east. Hence it may be attributed to Andronicus.⁶ Obviously paired with the foregoing is the buttress which takes the thrust of the great southwest pier of the nave⁷ since, inclining slightly to the west, it is not posed normal to the wall which it abuts. Internally it is divided into a long rectangular vaulted chamber flanked on the west by a stairway to the triforium, while at ground level it connects with the chambers north of the baptistery. (Cf. Fig. 10, Pl. XLVII A.) Inasmuch as the type of brick employed is very thin and light, and no traces of the flying buttress which probably stood here can be distinguished within the structure, it is safe to conclude that it is of late date and perhaps to be assigned to the Palaeologi.

In addition to the fully developed system of flying buttresses which absorbed on four sides of the church the outward thrusts of the nave piers and the vaults of the triforium, evidence exists which proves that the same system was in all probability carried to the upper parts of the church, in fact to the haunch of the dome itself. Thus at either end of the two great lateral arches of the dome and above them on the exterior there appear diagonal buttressing walls, two on the north side and two on the south, each carried upon a squinch arch worked into the angle between the inner face of one of the four great tower buttresses and the adjacent face of the

¹ Except that it is somewhat smaller, its projection being ca. 14.00 m. and its width ca. 10.25 m.

² Cf. Fossati, *op. cit.*, p. 6.

³ To a height of ca. 20.00 m.

⁴ Antoniadis, *op. cit.*, II, p. 239.

⁵ Dimensions: mean projection 20.00 m., width 14.02 m.

⁶ Antoniadis, *op. cit.*, II, p. 229.

⁷ Projection 14.40 m., with a bearing of ca. 10.00 m. upon the aisle wall.

lateral arch of the dome.¹ (Cf. Fig. 10.) From behind each wall a roof slopes gently down to the terrace wall atop the tower buttress (Fig. 11), while the wall and with it the face of the supporting squinch forms an angle of 27° with the lesser axis of the church.² Although these diagonal buttressing walls on squinches are now built up to a uniform horizontality and covered each with a double-pitched coping, their original form was quite different.

This is amply demonstrated from several sources³ which show that each buttress rose diagonally and at a sharp angle from the top of the tower buttress to one of the small exterior buttresses between the windows of the dome (cf. Fig. 12⁴), its direction being such that the five middle windows on the north and on the south sides of the dome were comprised between each pair of buttresses (Fig. 3). Each one of the latter, upon attaining the edge of the terrace from which the dome actually rises on the exterior, assumed the form of a strong half-arch which sprang across the open space of the terrace and met in mid-course the upright buttress between the two nearest windows of the dome, impinging upon the latter just below its top (Fig. 12). These semi-arches which, as Antoniadi remarks,⁵ so closely resembled Gothic flying buttresses, were removed during the course of the restorations carried out by Fossati at the middle of the nineteenth century, when the base of the dome was strengthened by a double system of chainage,⁶ and since no traces of these interesting structures are visible at present, our knowledge of them is necessarily based upon the sources mentioned above. From the latter, however, it is sufficiently clear that in form, construction, and method of application they were quite analogous to the flying buttresses upon the flanks of the church and, since they obviously carried to a logical completion the comprehensive system of



FIG. 11.—DIAGONAL WALLS, SQUINCHES AND BUTTRESSES OF THE SOUTH FLANK AS SEEN FROM THE SOUTHWESTERN MINARET

¹ Average length of these walls is ca. 6.30 m., width .65 m.; the crowns of the squinches stand about 39.00 m. above ground level. Antoniadi, *op. cit.*, III, p. 107.

² Antoniadi, *loc. cit.*

³ Sketches by the anonymous artist of 1574, cf. Freshfield, *A Letter to the Rt. Hon. Lord Aldenham*; others by Sandy, *Relation of a Journey begun An. Dom. 1610*, London, 1615, p. 31; Grelot, *op. cit.*, pls. pp. 87, 127, 243 (our figs. 7, 2, 3); Tournefort, *Relation d'un Voyage du Levant*, Paris, 1717, I, p. 476; Fossati, *op. cit.*, pl. 25.

⁴ Reproduced from Fossati, *op. cit.*, pl. 25.

⁵ *Op. cit.*, III, p. 108.

⁶ Fossati, *op. cit.*, p. 2.

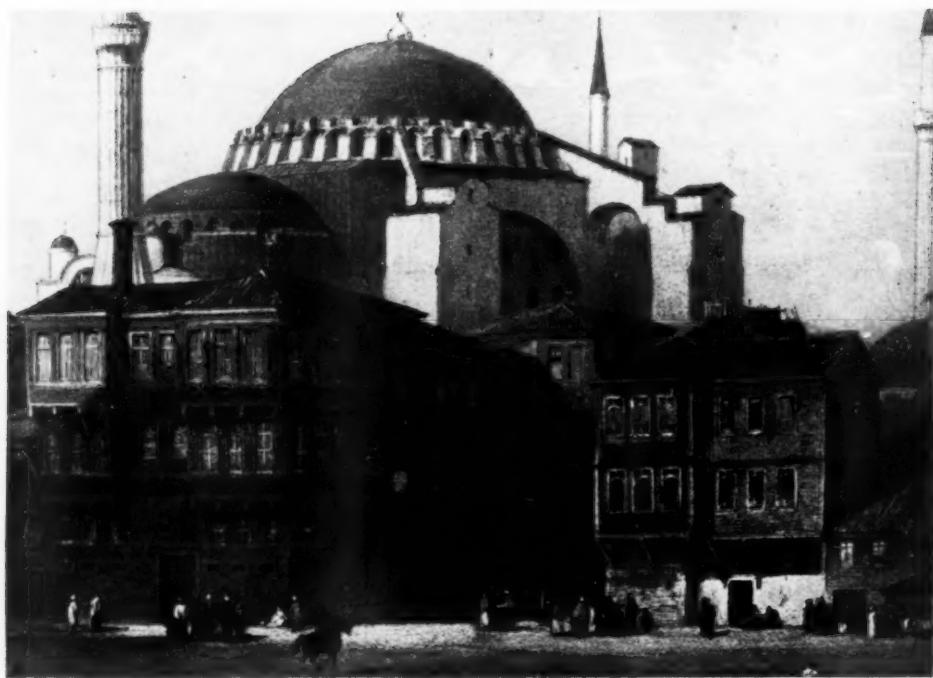


FIG. 12.—HAGIA SOPHIA FROM THE SOUTHWEST, WITH SQUINCH AND FLYING BUTTRESSES OF THE DOME, AFTER FOSSATI

buttressing at the lower levels, there can be little doubt that they formed an integral part of the unified and scholarly scheme of exterior buttressing by which the Latins solidified and preserved the entire structure of the church.¹

As our résumé of the terrestrial shocks to which the church of Hagia Sophia was

¹Antoniadi, *loc. cit.*, having remarked the Gothic character of the buttresses, naïvely suggests that the half-arch form was designed merely to afford an unobstructed passage for roofers and workmen about the terrace from which the dome rises. With equal naïveté he continues: "But these flying buttresses are very ancient, perhaps even dating from 563, since the pentagonal form of the terrace roofs of the four tower buttresses shows, as it seems, that the diagonal buttresses in question were erected contemporaneously with the parapets of the terraces themselves." A study of the latter, however, indicates that, whereas the *squinces* are probably contemporaneous with the tower buttresses, may well date from 563 and seem to have occasioned the pentagonal form of the terrace roofs, there is no evidence whatever for supposing that the diagonal flying buttresses were built at the same time as the squinches. As previously pointed out, the flying buttress form was quite unknown before the rise of the Gothic style; moreover, if the "diagonal buttressing walls" had been of the sixth century, they would certainly have been built solid and pierced by a full round arch no wider than was necessary for the passage of the "roofers and workmen." The only logical conclusion, therefore, is that the Latin builders, taking what measures were possible for the buttressing of the dome itself, seized upon the expedient of springing their flying buttresses from the tops of the tower buttresses, carrying them upon the heads of the squinches diagonally across the angle, and so leading them to the buttresses between the windows of the dome. As thus constructed they must have been of considerable service in strengthening the dome itself, at the same time relieving the great lateral arches of some of the thrust upon their crowns by transmitting the pressure directly to the tower buttresses, in full accord, be it noted, with the essential principles of Gothic engineering.

subjected prior to the Latin occupation has made clear, there can be little doubt that the conquering Crusaders upon their arrival in 1204 found the fabric of the church in a dangerously weakened state. Having converted the building to the uses of the western faith, a conversion which they had good reason to believe would permanently continue, it is entirely logical to suppose that they shortly took adequate measures to assure the stability of their newly acquired cathedral. The Frenchmen and Venetians of the Fourth Crusade were shrewd and practical men. The former, moreover, were representatives of the race which, more than any other at that particular period of history, was most deeply concerned with and most thoroughly skilled in the handling of just such problems as those presented by the threatening vaults of Hagia Sophia. This skill, this new science of thrust and counter-thrust in the support and control of lofty vaults and arches, must surely have been invoked for the structural salvation of the great church. And that this activity should have received no mention in the Latin chronicles of the time is not surprising, since affairs of far greater import were afoot to be recorded by the pens of contemporary writers. The silence of the Byzantines, who would allow no virtues in the hated usurpers, is quite understandable also.

If, then, it be admitted that the church was greatly in need of buttressing before the advent of the Latins, and such a conclusion seems inescapable, the character and extent of the activities of the Latins are even more clearly evident in the building as it stands today. Thus we have already seen that, of the flying buttresses of the west façade, originally eight or more probably ten in number, the one which still presumably remains unaltered is so closely paralleled by early Gothic buttresses in the Île-de-France that we are justified in concluding that it, together with its neighbors, as well as the vanished belfry, were almost certainly erected during the Latin occupation. If this be granted, the supporting masses at the middle of the northern and southern flanks of the church, originally flying buttresses, the single struts of which were similar to those of the west façade, must likewise be accepted as Latin work, and a corresponding attribution must be made for the flying buttresses of double struts which emerge from the roofs of the low chambers flanking the sanctuary apse on the south. In addition to the foregoing there may be observed in the ungainly buttresses of Andronicus flanking the apse on the north sufficient indications, when taken with Grelot's specific mention of "quatre arboutans" on the east side of the church, to justify the belief that within it are also embedded two flying buttresses (Pl. XLVII A, B). In like manner the huge masses erected by Andronicus to back the responds of the main northeast and southeast piers of the nave show indications of the same sort of incorporations, while a similar state of affairs may be inferred for his northwestern buttress; a corresponding strut, now destroyed, may perhaps be postulated at the southwest adjoining the baptistry. It thus appears reasonably certain that the church was once surrounded on all four sides by a complete and carefully articulated system of flying buttresses, at least seven, but more probably ten, of double struts upon the west front; probably four of similar type on the east; four of single struts supporting the north flank and doubtless a like range to balance the former on the south; four others, smaller in scale and lighter in construction, sprang diagonally from the tops of the four tower

buttresses upward to points between the windows of the dome. That this comprehensive scheme was scientifically conceived and skilfully executed as a unit for the purpose of stabilizing the entire vaulting system of the church wracked by quakes and weakened by the neglect of more than two centuries seems assured. That it was the work of the despised Latins appears equally certain.

In this connection one significant fact deserves at least a passing mention, since it indicates rather clearly that within some eighty-five years after the return of the Byzantines to power the Latins had obviously come to be highly esteemed in Constantinople for their structural skill. Thus we are told that in the rebuilding of the eastern arch and dome cast down by the earthquake of 1346 Cantacuzenus and John Palaeologus were assisted "by John, surnamed Peralta, one of the Latin subjects of the emperor."¹

The probable cause of the silence of contemporary historians regarding the important measures taken by the Latins to stabilize the entire fabric of Hagia Sophia has been suggested above. The failure of more recent scholars to recognize the hand of the Crusaders in the striking remains of an external buttressing system so typical of the structural methods of France in the early thirteenth century appears on the other hand surprising. Yet in view of the hatred inspired by the conquest and the abiding tradition transmitted by Byzantine historians of the destructive greed of the western barbarians, it is perhaps not unnatural that the freebooting Crusaders should have come to be regarded not only as the unmitigated scourge of the imperial city but also as the perpetrators of the most insensate vandalism ever inflicted upon the great church. But this opinion must now be revised. Even one most scandalously philhellene might, in view of the arguments adduced above, be willing to concede that the much maligned Latins were not as black as they usually are painted, but rather that they became in fact the saviours of one of the two greatest monuments of the Greek architectural genius.

¹ Cantacuzenus, *Lib. IV*, ed. Bonn, p. 30.

EMERSON H. SWIFT

COLUMBIA UNIVERSITY

SOME INSCRIPTIONS ON VASES. III¹

1. Athens 2226 (CC. 650) is the Attic fragment from Aegina published by Bendorff, *GSV*, pl. 54, 1. It comes from a very large krater-like vessel. The technique is already black-figure, but the flesh is reserved. The date must be well back in the seventh century. The neck is decorated with a row of swans; what remains of the principal picture, on the body, is the head and neck of a man, and to the right of him the beginning of an inscription, ΑΓ . . . Professor Karo has recently published fragments of another large Attic vase found in Aegina, the stand of a krater somewhat earlier than ours (26^{tes} *Hallisches Winckelmannsprogramm* pl. 1 and pp. 10-14): it is decorated with a procession of heroes, one of whom is inscribed Μενελας. Perhaps our man is ΑΓ[αμεμνον].

2. Here is a fragment (Fig. 1) I ought to have mentioned in my *Little-Master Cups* (*JHS*, 52, pp. 167-204) but forgot: it was found at Naucratis and is in University College, London. Just enough of the lip remains to show that this was a 'lip-cup' and not a 'band-cup'. More of the handle-zone is preserved: the black is much fretted, but you can make out, on the left, part of the left handle-palmette; on the right, the beginning of the picture in the middle; and between, half the inscription—for the word Τεισιᾶς must have been followed, on the other side of the picture, by another word. This may have been καλός, for love-names do occur on little-master cups, though not very often: but ἐποίησεν, though not certain, is rather more probable. The case is like those of Andrias and Smikrion (*JHS*, 52, p. 184 and pp. 190-1).



FIG. 1.—CUP-FRAGMENT IN UNIVERSITY COLLEGE, LONDON, N 11

A potter Teisias of Athens is known from kantharoi and kotylai discovered in Boeotia and very likely made there (Burrows and Ure, *BSA*, 14, pp. 292-3 and 305, and *JHS*, 29, p. 348; Pfuhl i, p. 207; Hoppin, *Bf.* pp. 347-50; Ure, *Black Glaze Pottery from Rhitsona*, p. 9 and *Sixth and Fifth Century Pottery from Rhitsona*, p. 34; Robinson, *Greek Vases at Toronto*, pp. 150-2). These are dated by Ure, who knows them best, about 500 (*BSA*, 14, p. 305), or in [the later part of] the sixth century (*Sixth and Fifth*, p. 34). It is conceivable that our Teisias is the same man, and that our cup is an earlier work of his, made before he emigrated: but this is naturally quite uncertain.

¹ My thanks are due to Prof. B. Ashmole, Prof. G. Karo, Dr. A. Maiuri, Dr. P. Mingazzini, Senator Dr. P. Orsi, Dr. F. Poulsen, Prof. E. Stefani, and Dr. W. Unverzagt, for their kind permission to publish vases and fragments in London, Athens, Naples, Palermo, Syracuse, Copenhagen, the Villa Giulia, and the Museum of Prehistory in Berlin; to my wife for the photographs reproduced in Figs. 5, 6, 8, and 9-12.

The remains of the picture on our cup are from the right leg of a naked male figure running to right: buttock and thigh, with incised detail; calf; heel. The cup was one of the not very many lip-cups with the picture in the handle-zone instead of on the lip (*JHS.* 52, p. 183, group ζ); unless indeed it had pictures in both places, which is rarer still (*ibid.* group η).

3. Schoene (*Museo Bocchi*, pl. 13, 1-2) publishes two fragments of a little-master cup: on each side, a ram, and below that, a fragmentary inscription which he calls

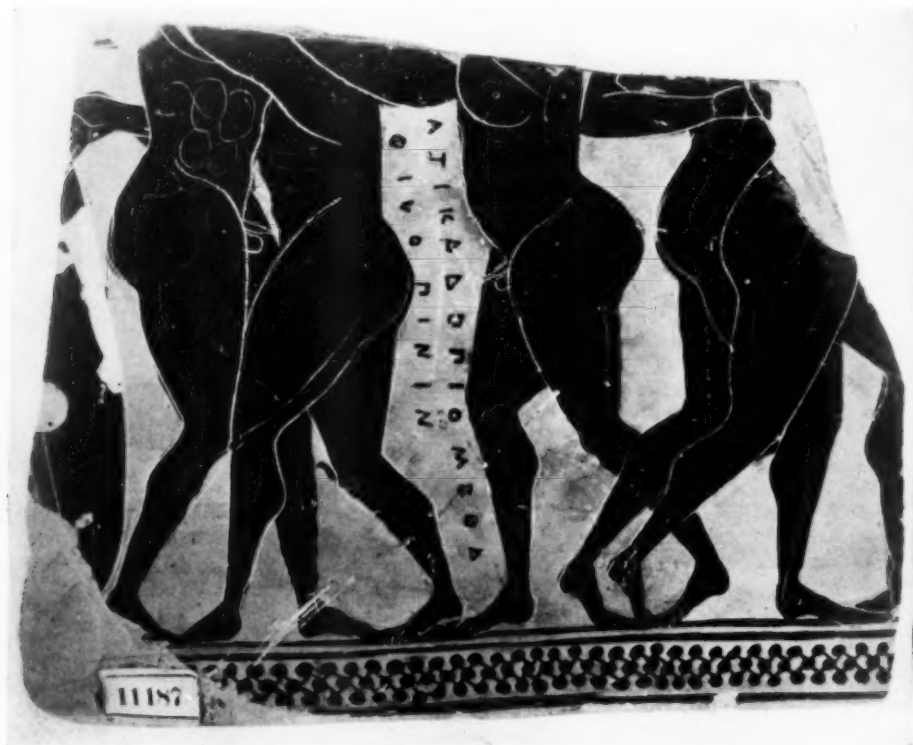


FIG. 2.—FRAGMENT OF A PLAQUE IN THE MUSEUM OF PREHISTORY, BERLIN

illegible, naturally enough at the time, but now we have analogies to help us—a cup in Copenhagen (*CV.* pl. 117, 5), another in the Louvre (*BCH.* 1931, p. 433), a fragment of a third in Florence, and a somewhat earlier cup in Captain Spencer-Churchill's collection at Northwick Park (see *JHS.* 52, p. 182). These show that the legend on one side of the cup published by Schoene is [χα]ίρεκαίπριουμ[ε]. On the other fragment . . . ουμ is all that appears in the picture—I have not seen the originals and do not know if they are still in Adria or not.

Blinkenberg's interpretation of the Copenhagen inscription as equivalent to χαίρε καὶ πρίω με (*CV.* p. 95) is preferable, I think, to Pottier's ingenious alternative, χαίρε καὶ πρίου μή (*BCH.* 1931, pp. 430-37).

4. The word Thorykion is known, first, from the amphora by Euthymides in Munich (FR. pl. 81), where it is the name of a young hoplite who is putting on his corslet; secondly, from Aristophanes *Frogs*, 363:—

— Θωρυκίων ὦν, εἰκοστολόγος κακοδαίμων.

It now appears on a fragment in Eleusis, from the shoulder of a small black-figured hydria, roughly contemporary with the amphora of Euthymides: remains of a chariot, and the inscriptions Θωρυκίον and παῖσχα[ιρε?].

5. Fig. 2 is a fragment of an Attic votive plaque, from the Schliemann collection, in the Museum of Prehistory in Berlin. 9mm. thick, 124 high, 140 across; the edge preserved below. It is said to have come from Peloponnese, and that is not impossible: I do not know of any Attic plaque found outside Attica; but after all a Corinthian plaque has been found on the Acropolis of Athens (Graef and Langlotz

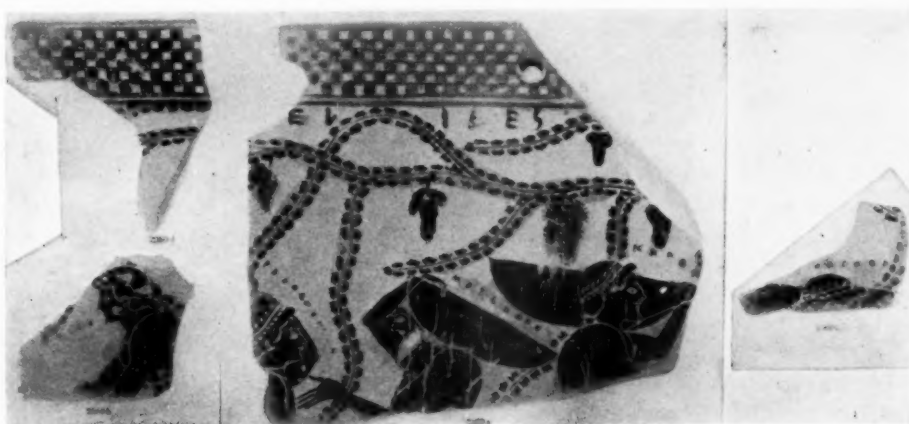


FIG. 3.—FRAGMENTS OF A PLAQUE, FROM THE ACROPOLIS IN ATHENS

pl. 109, 2578; Langlotz *ib.*, p. 252 top; Payne, *NC.* p. 142). The date must be late sixth century. Parts of six naked male figures. On the left, a shield, charged with a bull's head caboshed. Two inscriptions, both complete. Ἀτिकाδεπιόμεθα, and φιλοπινυν.

The Schliemann fragment does not seem to have been mentioned anywhere; but fragments of a similar plaque, from the Acropolis of Athens, have been known since 1888, and were published in 1925 (Graef and Langlotz pl. 107, 2560, whence our Fig. 3; on the painter see *JHS.* 54, p. 91). Vintage. Above, a spreading vine; youths, and a man, with shallow vessels on their shoulders, moving to right and to left; and inscriptions, giving what they are saying—or thinking. Two of these legends are complete: ἐδεκανεπλεα = ἥδη κανὴ πλέα (Wolters), "Baskets full now!" and μετακαγο = μέτα κάγώ, "I too afterwards!" The ends of two inscriptions are missing: καγοτ . . . , ἐκφεφορ . . . The fifth inscription, if my note is correct, may also be incomplete: ἐτι τι πει . . . The fourth inscription has been restored ἐκφεφορ[εκα] = ἐκπεφόρηκα (Kretschmer, *Vaseninschr.*, p. 90), "I have carried them out"—although ἐκφεφορ = [εταί or εταίπαντα] would also be possible. In μέτα κάγώ, the verb implied may be πιωμαι, as Kretschmer suggests. For the next he conjectures καγοτ[ρυγέσο] = κάγώ τρυγήσω,

but I should prefer *καγὼ τ[ι] πίομαι*. As to *επιτεπει*, . . . , the first part must be *επι τι*, and the second may be, as Kretschmer takes it, a part of *πίνειν*, or a bit of a part, for there may have been other letters to the left. The . . . *ελιδες* . . . in larger letters at the top of the picture does not concern us: it has always been considered part of the dedication.

Let us now return to the Berlin fragment. No, it is not from the same plaque as the fragments in Athens: subject and period are the same, and so is the technique—strong incisions for the major lines, lighter for the minor, traces of incised sketch: but the scale is smaller, the lettering larger and bolder, and, above all, the tablet is much thinner, 9 mm. against 14.5.

Of the six figures in part preserved, three are moving to left, three to right, at a good pace. They are sturdily built, and in two of them the horizontal lines on the middle of the body suggest a certain fleshiness. Let us begin with no. 2, counting from the left. The left arm is raised, and what you see at the top of the fragment must be a shallow vessel like those of the Athens plaque; held on the shoulder with the left hand, at the same angle as the basket of the bearded man in Athens. This particular shape of shallow basket is common in vintage-scenes, and is used alternatively or together with a deeper sort:¹ we see it on the ground, with the grapes being gathered into it; or carried as here; or being emptied into the vat.² The right arm of no. 2 is extended and passes behind no. 1, with hand and forearm showing. The bit of black near the upper left-hand corner of the fragment belongs, I think, to the right arm of no. 1, extended from the shoulder: the plaque is chipped to right and left of the black, and above. 1 and 2 appear to be colliding: for not only does 1's right thigh cut a little in front of 2's left, but 2's left arm is on this side of 1's body and his right on the far side. Barging into one another purposely is part of the fun. 3's left arm is raised, no doubt with a basket, but nothing remains. 4 and 5 are side by side; 4, from the position of his breast and right arm, may have been looking round. The right foot of 6 just shows on the right.

I wish I could explain the shield on the left of the fragment: for a shield it must surely be. Grape-baskets sometimes have rims (Amasis amphora in Würzburg, Langlotz pl. 74; cup in the Cabinet des Médailles, 320, *CV*. pl. 50, 2-3); but the bull's head looks like a shield-device; and on the left we perhaps see a morsel of the inside, with the cords.³

Now the inscriptions. *Ἀττικὰ δὴ πίομεθα*. There must be a contrast in the speaker's head between produce of Attica and produce of other places; and Prof. D. S. Robert-

¹ Both sorts: bf. cup in the Cabinet des Médailles, 320 (*CV*. pl. 50, 2-3). For the shallow sort in other contexts, see *CV*. Oxford, text to pl. 2, 9.

² On the ground, bf. cup in the Cabinet des Médailles, 320 (*CV*. pl. 50, 2-3). Carried, rf. column-krater in Athens, *Arch. Eph.* 1924, p. 106. Dumped, bf. amphora by the Amasis painter in Würzburg, Pfuhl fig. 222, Langlotz, pl. 74. Ready to dump, rf. column-krater by the Petrograd painter in Lecce (*CV*. III Ic, pl. 6, 1), rf. column-krater by the Orchard painter in Bologna (*CV*. III Ic, pl. 28, 1).

³ The problem is now solved. A fragment recently discovered in the American excavation on the North slope of the Acropolis, and published in *Hesperia* IV, 1935, p. 223, was seen by Miss M. Z. Pease to come from the same plaque as Acropolis 2560: it gives part of a figure of Athena—hand holding out helmet, some snakes of the aegis, inscription *[ΑΘ]ῆνα*. The goddess was represented sitting in the midst of the vintagers. Miss Pease pointed out to me that this explained the shield on the Berlin fragment: it is Athena's, and the goddess was watching the work.

son suggests to me that the noun implied may be *γένη* or the like. I feel that the neuter plural does require explanation: *πολλά πίνειν* we know:—

πολλά πιὼν καὶ πολλὰ φαγὼν καὶ πολλὰ κακ' εἰπὼν . . .

But I don't remember *πίνειν* or *ἐσθίειν* with any other adjective in the neuter plural.¹

φιλῶ πίνειν. The artist writes *πινιν*, and *may* have rendered the *ει* sound by *ι*: but that is very rare in earlier Attic²—the two sounds must have been well apart. I should prefer to think that he has simply left out a letter through inadvertence.

πίομεθα: what is the occasion they are thinking of? The rejoicings, some months hence, when the new wine is broached. *πίομαι*—*πίομεθα*—*πίνειν*—these are the words now running in their heads; and here is a poem from the Anthology (6, 44), which puts the simple ejaculations into perfect form:—

ἄδῃλον, οἱ δὲ Λεωνίδου Ταραντίνου.

γλευκοπόταις Σατύροις καὶ ἄμπελοφύτορι Βάκχῳ
Ἡρώναξ, πρώτης δράγματα φυταλιῆς,
τρισεῶν οἶνοπέδων τρισσοῦς ἱερώσατο τοῦσδε,
ἐμπλήσας οἶνου πρωτοχύτοιο, κάδους.
ὦν ἡμεῖς σπείσαντες, ὅσον θέμις, οἶνοπι Βάκχῳ
καὶ Σατύροις, Σατύρων πλείονα πίομεθα.

6. Fig. 4 shows a small white kotyle, 5.5 centimetres high, in the Ny Carlsberg collection at Copenhagen. On each side, a bearded face seen from the front, with a palmetto rising from the forehead; at each handle, a design of three palmettes. Vases of this shape belong to the late sixth century or the beginning of the fifth: Ure gives an account of them in his *Sixth and Fifth Century Pottery from Rhitsona*, pp. 69–71, classes M and N; there are other examples in Brussels (R 283: *CV*. III He pl. 4, 2; some repainting), Toronto (282: Robinson pl. 29 and p. 96), the Cabinet des Médailles (348: De Ridder p. 239; *CV*. pl. 67, 10–11), and elsewhere. One side of the Copenhagen vase is inscribed *Πιστίας*. One would like to think that the head was Pistias' portrait, but I fear it is only Dionysos.



FIG. 4.—WHITE KOTYLE IN COPENHAGEN, NY CARLSBERG

7. A small fragment of a plate, in the Villa Giulia (Fig. 5), is inscribed . . . *ικτ* . . . This should be part of a signature—[Επ]ικτ[ετος εγρασφεν]. What remains of the pic-

¹ Mr. D. L. Page quotes me Critias 4,26 Diehl, *ἐσθιεν καὶ πινεν σύμμετρα πρὸς τὸ φρονεῖν*, and compares Anacreontea 43,3 Edmonds, *μεθίομεν ἀβρά*, and 44,5 *πίνωμεν ἀβρά*. Mr. A. S. F. Gow gives me a similar use of the neuter singular: Antiphanes fr. 24 (Ath. 10, 441B), *ἐμοὶ κεράννυται|οἷθ' ὕδαρες οὔτ' ἄκρατον*.

² The instances in Kretschmer (*Vaseninschriften*, pp. 131–6), amount to very little, if you cut out *Χιρων*, *Σκιρων*, *Σιληνος*, which are evidently the correct forms.

ture is a hand with a bit of the forearm, perhaps from a dancing figure—compare the signed cup in the Torlonia collection (*Jb. Arch. I. 6*, pl. 5, 2, whence Hoppin, *Rf. i.*, p. 333) or the lost signed plate (*Jb. Arch. I. 44*, 159). There is a reserved line close up to the rim, as in most of the Epiktetos plates.



FIG. 5.—PLATE-FRAGMENT
IN ROME, VILLA GIULIA

8. Acropolis 172 is a small fragment of a cup: inside, part of the line border; within this, the letter . . . σ . . . ; outside it, the beginning of a word, *εὐερ* . . .—probably the name *Εὐερ[γίδης]* (*JHS. 33*, p. 348). The fragment Acropolis 107 joins: the first inscription now becomes . . . *επο* . . . which must be part of *επο[ιᾶσεν]* or the like, and we get a bit of the picture, forearm and hand holding crotala (Fig. 6). The position of hand and arm shows that the fragment is from the upper right-hand portion of the picture. The figure, whether male or female, will have been dancing. The period is early red-figure, and the style of what remains agrees well enough with that of the *Euergides* painter. We might restore *Εὐερ[γίδης] επο[ιᾶσεν]*, but the letters of the proper name are closer together than those of the verb, and it is more likely that the proper name belonging to the verb was within the circle, on the other side of the figure. This name may have been *Euergides*; but Langlotz may be right in supposing (Graef and Langlotz ii, p. 13, on no. 172) that the *Euer* . . . preserved is part of a dedicatory inscription, *Εὐερ[γίδης] ἀνέθεκε τειλαθηναιαί* or the like. This position, outside the border, is often used for *incised* dedications (e.g. Langlotz pl. 14, no. 258).

9. In *JHS. 48*, p. 127, I noted that the young man on a cup of the early fourth century in the Mouret collection (*CV. pl. 5*, 2) should be [ΙΙ]αράλος and the only representation of him in vase-painting. Perhaps I ought to have added that his name was read by Cecil Smith, though hesitatingly, on the London cup E 16 (*B. M. Cat. iii* p. 51: no. 14 in my list of vases by Oltos, *Att. V. p. 41*). *ραλος* is there: but it is doubtful whether there was ever anything in front of the rho; and as several of the other inscriptions on the cup are obviously senseless, this is probably so too.

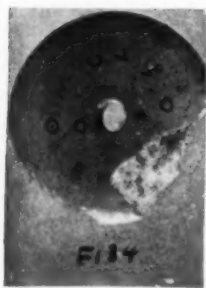


FIG. 7.—ALABASTRON-
MOUTH FROM THE
ACROPOLIS IN ATHENS

10. Fig. 7 is taken from the Acropolis fragment 863 (Graef and Langlotz ii, pl. 75). It is the mouth of an archaic alabastron, and you see it from above. Langlotz (p. 81) reads the inscription *ΚΑΛΟΣ ΕΚ . . . ΟΣΛΟΜΟ*, without explaining. Dr. Peek, to whom we owe some valuable revisions of the Acropolis inscriptions, says 'perhaps *κ[αλ]ὸς ὅς ὃς Θεσ[σ]αλο*' (in Graef and Langlotz ii, p. 133). I read the outer line *λοσθεκ[αλ]ος* (the upper tip of the second lambda is preserved), that is, *λοῦσθε καλῶς*,

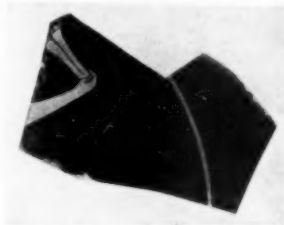


FIG. 6.—CUP-FRAGMENT, FROM
THE ACROPOLIS, IN ATHENS

'have a nice wash', addressed to the users of the alabastron, which will have been for communal use. The inner line reads αλο·, and there is hardly room for an initial kappa in the break: I can only suppose that the kappa in the outer line does double service:—the writer having finished his outer line decides to repeat the καλωσ; but the kappa he has already written, being the letter nearest him, catches his eye and he proceeds as if he had just written it.

11. Fig. 8. Fragment of a red-figured lip-cup, from Selinus, in Palermo: the left-hand figure on one half of the outside remains. The fragment has been published

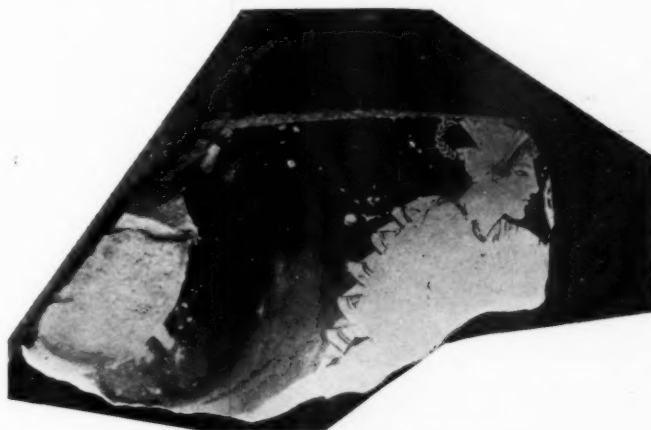


FIG. 8.—CUP-FRAGMENT IN PALERMO

by Gábrici (*Mon. Ant.* 32, pl. 95, 6), but he does not mention the inscription: the woman is ΘΕΤΙΣ. We may therefore surmise that the subject was the combat between Achilles and Memnon, with Thetis and Eos, as on the Berlin painter's volute-krater in London (E 468: *Berliner Maler*, pls. 29–30), especially as the position of right arm

and hand are the same. The cup was an early work of Douris.

12. Pape cites the name Phyrmos from the Planudean Anthology (322):

Φ ρμος με Φ ρμον, πυρ'όρος τὸν πυρ'όρον,
ὁ παῖς ὁ ῥήτωρ τὸν πατέρα τὸν ῥήτορα.

This was evidently copied from the base of a statue set up in the precinct of the deity—Apollo, Asklepios, or another—in whose service the Phyrmoi, father and son, had held the office of fire-bearer. The writer not being named on the base—it was presumably the younger Phyrmos himself—the poem is anonymous. I cannot date the lines, but suppose that a man would not be called ῥήτωρ on his statue until the Hellenistic period.¹

The corresponding feminine name Phyrme is quoted by Pape from a child's epitaph in elegiacs, found in Italy (*CIG.* 3, 6205), which begins:

"Ανθος ἐγὼ λεγόμεν υἱὸς Ἑρμογένους τε καὶ Φύρμης.

From the scansion this is of no early date.

The name occurs on a red-figured cup of about 480 B.C. in Naples (Santangelo 269: Fig. 9). It represents a young reveller with a kotyle, full of wine, in his hand. Φυρμος is written to right of him, and as it is not followed by *kalos*, is probably his

¹ Mr. M. N. Tod kindly confirms this impression.

name. The painter is Makron, and the cup no. 63 in my list of his works, *Att. V.* p. 215. The inscription is given by Heydemann in his catalogue, but seems to have been overlooked since, and I do not know any explanation of the name.

13. The beautiful white cup recently found in the Agora of Athens, and published by Miss Talcott in *Hesperia* 2, pp. 224-30, bears the fragmentary inscription . ρινοςκ . . . Miss Talcott writes (p. 229) that 'we know of no Attic name of six letters of which the last five read ρινος, nor is there any reason, from the state of the cup's



FIG. 9.—CUP IN NAPLES, STG. 269

preservation, to assume that more than one letter is missing.' We can go farther: there is room for one initial letter, and only one, in the fracture.

Miss Talcott tentatively suggests [Φ]ρινος, written for [Φ]ρυνος, and gives a good parallel for iota taking the place of hupsilon. But I fancy she is not enthusiastic about the suggestion, and will not mind my making another. I propose [Ε]ρινος κ[αλος] = [Ἡ]ρινὸς κ[αλός]. The word does not seem to be found as a proper name in just that form; but I remember Earinos from three pretty epigrams by Martial (9, 11-13):—

Nomen cum uiolis rosisque natum,
quo pars optima nominatur anni . . .

and turning to Bechtel I find that he reports *φειρινος* from Thespieae, 'before 350

B.C.' (Bechtel, *Die historischen Personennamen*, p. 526; from *CIG.* 7, 1919, where the accent *φειαρῖνος* must be a misprint).

The ancient grammarians are strong on *ἥρος* as the Attic genitive of *ἥρα*, but as far as I can find they do not pronounce between *ἥρινός* and *ἑαρινός*, and the two forms no doubt existed side by side in Attica. Manuscript tradition is not final in such matters, but I note (verifying the references given by Stephanus and Liddell and Scott) that in Xenophon's *Cyrupædia* 8, 6, 22, the manuscripts read *ἑαρινῶ*, while in his *Hellenica* 3, 2, 10 they read *ἥρινου*. But I need not labour this point: for although the man's name *ἥρινός* does not occur elsewhere, the woman's name corresponding to it, *Ἡρινή*, does:—on an Attic tombstone in Athens (Kastriotis 868, with false reading), published by Conze (*Die attischen Grabreliefs* pl. 342 no. 1615; Bechtel *Frauenamen* p. 44, 3729), and recently republished by Möbius (*Ornamente der griechischen Grabstelen* pl. 11, a, and p. 26), who ascribes it to the early part of the fourth century.

14. *Πολυΐδος* in Sophocles; and *Πολυΐδος* in Homer. According to Pearson (*Fragments of Sophocles* ii, p. 58) the form *Polyeidos* is 'entirely late'. Murray, Cecil Smith, Höfer, Hoppin read *Πολυειδος* on the Sotades cup in the British Museum (*White Ath. V.*, pl. 16; *Cat.* iii, p. 391, D 5; Roscher, s.v.; Hoppin, *Rf.* ii, p. 429). But what the cup shows, as far as I can make out, is *Πολυιδος*.

15. The Naples bell-krater reproduced in Fig. 10 (*Att. V.* p. 415, Komaris painter no. 2) has often been published but never adequately: the reproductions in Welcker (*A.D.* iii, pl. 30, 1), Inghirami (*V.F.*, pl. 167), Panofka (*Bilder ant. Lebens*, pl. 15, 4), Overbeck (*Her. Bildw.*, pl. 38, 22) Daremberg and Saglio (s.v. *ancora*, fig. 318) all go back to the cut in d'Hancarville (ii, pl. 27). D'Hancarville omits the inscriptions; Welcker was unaware of any, and his interpretation ('Odysseus akantoplex'), though accepted by Panofka and Overbeck, was overthrown by Stephani (*Compte rendu* 1865, suppl., pp. 137–140), whose own explanation of the unique picture must be correct in the main: a fisher-boat is making for the shore; one man is still rowing, the other casts anchor: a heron or heron-like bird flies to land before the storm; on the rocks (indicated by red lines) a woman sits watching. Stephani gives the inscriptions, though he does not say where he got them; the vase would not seem to have been very long in the Naples Museum, as it is not in Heydemann's catalogue; but of course it may have been mislaid. The woman is named ΠΟΝΤΙΑ, the youth at the stern ΑΛΙΜΟΣ, the rower ΚΟΜΑΡΙΣ. Stephani sees in Pontia 'a personification of the rocky shore, *ποντία ἀκτὴ* or rather *σκοπιά*'. The word is known as an epiklesis of Aphrodite, and naturally as an informal epithet of Thetis and other Nereids (Höfer in P.-W., s.v.). On an Attic hydria in the Louvre, belonging to the second quarter of the sixth century (*CV* III Hd pl. 12, 1–3 and pl. 13) one of the Nereids is inscribed ΠΟΝΤΙ: I did not notice if there was anything missing after the iota: if so, Pontia, read by Newton and Birch in 1856 (*Report on the Campana Collection* p. 9) is preferable to Friis Johansen's Pontia[s] (*Iliaden*, p. 61).

Stephani reads ΔΑΙΜΟΣ and emends to ΑΛΙΜΟΣ: as a matter of fact ΑΛΙΜΟΣ is what is written. 'Αλιμος is not found as a proper name elsewhere. The word is adjective to *ἄλς*. Hesychius quotes *ὄτοβος ἄλιμος*, as equivalent to *θάλασσα θορυβωδής*, from a poet (Nauck, *Trag. gr. fr.*, adespota 247; although the words need not be from a trage-



A



B

FIG. 10.—BELL-KRATER IN NAPLES

dian). Liddell and Scott also cite τὰ ἄλιμα for 'the seaside' from the Septuagint, and ἄλιμον is a plant growing near the sea (Hesychius, s.v.; etc.). As a name, Halimos corresponds to Pontia.

Stephani gives the third name as Κομμαρίς, and takes that to be for καμμαρίς or κάμμαρος, a kind of crab—like Ha'imos a good name for a fisherman. But what the painter has written is KOMAPΙΣ, which occurs once elsewhere, in a line of Epicharmus quoted by Athenaeus in his section on marine food-facts (7, 319 b = Epicharmus fr. 47 Kaibel):—

κομαρίδας τε καὶ κύνας κέστρας τε πέρκας τ' αἰόλας.

Here κομαρίς must mean some kind of fish or other sea-delicacy,¹ and it makes just as good a name for a fisherman as καμμαρίς; it does not occur as a proper name elsewhere, but animal-names for men are of course common.

The question now arises, whether the scene is from everyday life—a pair of fishermen putting in to land—or whether they are personages of story. That the artist has named them is perhaps against their being ordinary fishermen; for workmen are generally nameless on vases—the only exception is the Arkesilas vase, and that is not Attic. Now the deme Halimous was on the seashore near Phaleron, 35 stades from Athens. We hear nothing of a Halimos reputed its founder, but χαλιμοῖς—οὗς is an adjectival form, and may not the Halimuntians have traced their origin to a Halimos, a fisherman or boatman who put into that coast and was welcomed by a sea-nymph or the nymph of the seashore? Phaon was another boatman who found divine favour, and a vase of the same period as ours shows Phaon in his boat, Aphrodite stepping into it, and Athena watching from the shore (Bologna 288 bis; Pellegrini, *VF* pp. 134–5, whence *Jb. Arch. I.* 31, p. 209 and Pfuhl, fig. 557; see *Vases in Poland*, p. 54).

One word more. Welcker's interpretation was based on the roach-sting in the heron's beak (Robert, *Heldensage* iii, pp. 1438–9), and the latest writer on Telegonos (Scherling in Pauly-Wissowa, s.v.), unaware perhaps of the inscriptions pointed out by Stephani, finds the roach-sting on our vase so characteristic that he is disposed to follow Welcker in connecting the picture with Aeschylus' *Psychagogoi* (Nauck, fr. 275). But the bird is not certainly a heron; and as for the 'roach-sting', it seemed to me nothing but a lot of accidental scratches.

16. Of the Amazon-names on the squat lekythos by the Eretria painter in New York (*B. Metr. Mus.* 27, pp. 104–8; *A.J.A.* 1932, p. 97, Figs. 6–7), Μιμνοία occurs for the first time. May it not be based on the two master-words of a line like *Iliad* 8, 80:—

Νέστωρ δ' οἷος ἔμμνε Γερήνιος, οὔρος Ἀχαιῶν
for instance

*Γλαύκη δ' οἷη μίμνε . . . ?

(cf. *Λητώ δ' οἷη μίμνε . . . (H. Ap. 5)*

An audacious formation: but compare the Τερπεκληος of the Nearchos aryballos in New York, from the

οἱ δὲ ἔκηλοι τέρπονται . . .

¹ Cf. also Hesychius κομμάρα ἢ κομάραι · καρίδες · Μακεδόνες, and Kretschmer in *Glotta*, 22, 1933, p. 103.



FIG. 11.—BELL-KRATER IN SYRACUSE, 30747

of *Iliad* 5, 759, if Miss Richter's alternative suggestion, as I think, is the right one (*A.J.A.* 1932, p. 274, note 6).

17. The stamnos by the Kleophon painter in the Ny Carlsberg collection has small, hasty, and now faint inscriptions not noticed in the publication (Poulsen, *Etruskerstadt*, pls. 26-28; part of A, Dugas, *Aison*, Fig. 13). The left-hand reveller is *Λυσίς*, the second *Χίων*, the fourth *Χίλων*. The third is inscribed ΕΙΩΝ, but the first letter is blurred and the second broken: Δίων? Βίων? Odd that the three names are known from much earlier vases: *Lysis* from many cups of the earlier part of the fifth century, *Chilon* and *Chion* from cups by *Oltos* in the late sixth. The stamnos has a graffito, not mentioned either, ΤΡ, which occurs, alone or with other letters, on three other stamnoi by the Kleophon painter.

18. The bell-krater from Camarina, Syracuse 30747, has been published twice (*Not. Scav.* 1912 p. 369; Libertini, *Museo di Siracusa*, p. 93, n.), but the faint inscriptions, which I fancy I may have been first to notice, have not been given. The vase is no. 9 of the *Dinos* painter's works (*Att. V.* p. 448), and was painted sometime in the last two decades of the fifth century (Figs. 11-12). The young warrior pouring a libation on the kindled altar before leaving home is Πανδίων. The woman facing him — wife or mother — who has just filled his phiale, is not, as far as I could see, named. The bearded man watching him is Ακάμας. The companion of Pandion at the right of the picture is Οἰ[ν]εύς, and the young girl with her hand in his is Χοῖρος. The three male figures are the eponymous heroes of three Attic tribes. Oineus was said to be son of Pandion, but here they are evidently thought of as brothers or ἡλίκες. Pandion occurs on two other vases: a little earlier than this on an oinochoe by the Eretria painter in Palermo (12480; *Atti della R. Accademia di Palermo*, 14, 1928-9, pl. 2; no. 8 in my list of the painter's works, *Att. V.* p. 430), where he is pouring a libation, as here, before setting out, and Procne — his daughter according to tradition — is with him; and, a little later than our vase, on the lekanis by the Meidias painter in Naples (Santangelo 311; *Bull. Nap.* n.s. 1, pl. 3; Nicole, *Meidias*, pl. 15, and, after *Bull. Nap.*, p. 100: no. 32 in my Meidian list, *Att. V.* p. 462). The subject of the Naples vase is not "ephebes and courtesans" (Reinach, *Rép.* i, p. 474), but Pandion and Antiochos, heroes of the tribes, in glory and joy. Antiochos reappears on the Meidias hydria in London (FR. pls. 8-9; *CV* pls. 91-2); and there we also find Oineus and Akamas, as on our vase, and a fourth tribal hero, Hippothon. All these representations of tribal heroes belong to the last twenty-five or thirty years of the fifth century; later, early fourth century, is the Hippothon, as a baby suckled by a mare, on an oinochoe in Tübingen (Schweitzer, *Herakles*, Fig. 23 and p. 81; Watzinger, *GV in Tübingen*, pl. 39, E 180); earlier, the same hero witnessing the departure of Triptolemos on the bell-krater by the Oreithyia painter in Palermo (Politi, *Vasi di premio*, pls. 7-8; *Att. V.* p. 293, no. 3). Akamas is bearded in the Meidias hydria as well as in our vase; is thought of as the Athenian king (Furtwängler in FR. i, p. 44).

There is still the little girl. She is given the homely name of Choïros, which does not seem to occur, as a woman's name, in our records, although Choïro, Choïris, Choïrina and Choïridion do; but it does occur, as the name of a maenad, on another vase by the same painter as the Syracuse bell-krater, Naples 2369 (*Mus. Borb.* ii, pl. 45; no. 14 in my list, *Att. V.* p. 448).



FIG. 12.—FROM A BELL-KRATER IN SYRACUSE, 30747

19. The pelike Athens 1185 (CC. 1265), of the late fifth century, represents a youth leaving home: he holds a phiale which a woman is filling from a jug; a bearded man is leaning on his stick watching. Inscriptions, not observed by Collignon, show who the persons are. The bearded man is called Α[ιγ]εύς. As to the other names, only one letter of each is preserved: an epsilon of the youth's, a rho of the woman's: but having Aigeus we may restore [Θηρ]ε[υς] and [Αιθ]ρ[α].

J. D. BEAZLEY

OXFORD

NOTES ON IONIC ARCHITECTURE IN THE EAST

AMONG the few material results of Alexander's conquests in the East, the Gandhara sculptures of Northern India have long been known as one of the chief manifestations of provincial Hellenism that grew up in the wake of the Macedonian's armies. Little, if any, of this Graeco-Buddhist art can claim to have been produced earlier than the days when the Punjab was once more held by the Greek adventurers, those from Bactria; with the fall of the Maurya dynasty, they set up their precarious sovereignty at Taxila until the coming of the Parthians and Scythians forever ended Greek rule in Asia. Through their rarity and, as we shall see, because of their greater antiquity, the examples of Ionic buildings in the Eastern reaches of Alexander's world empire are among the most valuable documents we have for the extent of Hellenistic civilization in the Orient. The two Indian monuments with which we shall be principally concerned were both found at Taxila, the capital of Alexander's ally, Rajah Taxiles, and later, of the Macedonian's successors in the Punjab; these are the vihara excavated by General Cunningham at Mohra Aliar¹ and the "fire temple" uncovered by Sir John Marshall at Jandial.² They are the only works of architecture that have been claimed as works of the period of Greek occupation.³ Outside of India, the examples of Eastern Ionic which will be studied are the Ionic tomb recently discovered in Kurdistan,⁴ the remains of a temple at Khurha near Daulatabad in Western Persia, and the remnants of Ionic columns at the Parthian city of Assur. The remains at Taxila will be examined in connection with these possible prototypes in Persia with a view to establishing the stylistic source of the Indian Ionic and its proper chronology. In like manner the finds of sculpture of the Seleucid period in Persia could profitably be studied in connection with the origins of the provincial Greek art of Gandhara.

We shall not be concerned with the unanswerable question of whether or not the capital of Ionic type in Hellas and the East is derived from a common Western Asiatic form,⁵ or, as so many distinguished archaeologists have argued, from Egyptian prototypes.⁶ I think we may state that the order with attached volutes at Persepolis, so often referred to as Ionic, has about the same relation to the Greek capital of this order as the archaic carvings on the columns of Croesus' Temple at Ephesus have to the reliefs of the great kings at Persepolis; that is, it seems likely that we should regard both as completely separate developments, perhaps from a common antecedent.⁷ There is one monument found in India which, since it has

¹ General Sir Alexander Cunningham, *Archaeological Survey of India* (hereafter referred to as *A.S.I.*) V, pp. 68-73.

² Sir John Marshall, "Excavations at Taxila," *A.S.I. Annual Report*, 1912-13, pp. 35-38.

³ W. W. Tarn, "Notes on Hellenism in Bactria and India," *J.H.S.* 22, 1902, p. 284.

⁴ C. J. Edmonds, "A Tomb in Kurdistan," *Iraq* I, 1934, pp. 183-192.

⁵ The term *Western Asiatic* may be understood as including the various early civilizations of Mesopotamia and the Near East: Sumerian, Assyrian, Hittite, etc.

⁶ Felix von Luschan, "Entstehung und Herkunft der Ionischen Säule," *Der Alte Orient*; Leipzig, 4, 1912, p. 42.

⁷ Anton Moortgat, *Hellas und die Kunst der Achaemeniden*, Leipzig, 1926, p. 37: "Eine chronologische Priorität lässt sich auf keiner Seite feststellen," p. 26.

been claimed as Ionic,¹ must be briefly mentioned before we proceed to the discussion of the works at Taxila; this is the colossal capital discovered at Patna (Pataliputra), the centre of the Maurya Empire (Figs. 1 A-C). This monument is chiefly interesting as a mixture of the very common elements of Western Asiatic origin from which the Greek Ionic and Persepolitan order derived their most typical features.² As will be demonstrated, it has nothing to do with the examples of true Ionic at Taxila. Clearly Persepolitan in character is the motif of rosettes enclosed within the fern-frond volutes on the sides of the capital and the row of rosettes on



FIG. 1 A.—COLOSSAL CAPITAL FROM PATALIPUTRA
(Resident's House, Bankipore)



FIG. 1 B.—CAPITAL FROM PATALIPUTRA

the abacus, which recall the decoration of the frames of the Persepolitan friezes. The palmette, bead and reel, labial, and spiral motifs that are found on the lateral face again are of common Western Asiatic origin.³ The striking resemblance of this capital to what appears, at first glance, to be a debased Ionic in the architectural brackets found in the dwellings of Kurdistan today, suggests that these simple wooden post-tops and the Maurya capital are both derived from forms of great antiquity, forms of folk art that inevitably survive almost unchanged through many strata of culture;⁴ of these primitive types, the Persepolitan capital, the Greek Ionic, and, as we have seen, the Maurya bracket capital, are, perhaps, all merely more sophisticated variants.⁵ Although the Patna capital was probably

¹ V. A. Smith, *History of Fine Art in India and Ceylon*, Oxford, 1911, describes this capital as "quasi-Ionic" and suggests that it resembles "the capitals of the temple of Apollo Didymaeus at Miletus." Cf. J. Fergusson, *History of Indian and Eastern Architecture*, 2nd edition, London, 1910, p. 207 n.

² L. A. Waddell, *A Report on the Excavations at Pataliputra*, Calcutta, 1903, pl. II.

³ The bead and reel is found on the royal Achaemenid tombs at Naqsh-e Rostem (Cf. M. Dieulafoy, *L'Art Antique de la Perse*, Paris, 1885, fig. 93, p. 68).

⁴ E. E. Herzfeld, *Am Tor von Asien*, Berlin, 1920, pp. 105-107.

⁵ D. S. Robertson suggests a theory related to this problem (*A Handbook of Greek and Roman Architecture*, Cambridge, 1929, p. 60): "It may be that the classical Ionic form is an adaptation of the Aeolic

carved in the third century B.C., the very time when Seleucus Nicator's ambassador was resident at the court of the Maurya Empire, there is nothing to indicate that the work is in any way Greek.¹ It was not until later, in the period of the last Greek rulers in Northern India and at the end of the Seleucid period in Persia, that the true Greek Ionic penetrated to Persia and beyond the Khyber Pass.



FIG. 1 C.—RECONSTRUCTION OF THE CAPITAL FROM PATALIPUTRA

The Ionic temples at Taxila are certainly among the very earliest examples of Hellenistic art in India, and, in the case of the Jandial shrine at least, seem to show the participation of actual Greek or Greek-trained architects. They correspond to the handful of metal and terracotta objects uncovered at Taxila and elsewhere, which properly be-

long to the period of Greek and Graeco-Parthian rule in the Punjab—earlier than the vast production of the Graeco-Buddhist workshops that date from about the beginning of the Christian Era to the sixth century A.D. Of these buildings, only

school of decoration to a special type of timber construction, the 'bracket-capital' so often found in modern wood buildings."

¹ Another capital of exactly the same form, though of a later period, is preserved in the museum at Sarnath. This fragment is wrongly described by A. W. Lawrence (*Later Greek Sculpture*, London, 1927, p. 79, pl. 108b) as revealing "Greek more than Mesopotamian inspiration."



FIG. 2.—TEMPLE AT JANDIAL, TAXILA

(From Archaeological Survey of India, Report 1912-13)

the temple at Jandial (Fig. 2) has a plan resembling that of a Greek shrine; as demonstrated by Marshall, the ground plan is that of a Greek peripteral *templum in antis* with windows or doorways at regular intervals suggesting the encircling colonnade of the Hellenic arrangement; there are also units corresponding to the pronaos, naos, and opisthodomos, and, as in the Parthenon, a chamber between the sanctuary and the opisthodomos. Between the antae were found the remains of the Ionic capitals (Fig. 3) and the drums of the columns. These capitals are provincial and dry versions of the Ionic of the Temple of Artemis at Ephesus. There is also a superficial similarity to the capitals of Magnesia, but the intermediate step is to be sought in examples in Persia of the Seleucid Period.

The discovery, near Mahallat in Persia, of an Ionic *templum in antis* (Fig. 4)



FIG. 3.—DETAIL OF CAPITAL FROM JANDIAL, TAXILA

furnishes us with such a prototype for the monument at Taxila.¹ In writing of the ruins at Khurha, Professor Herzfeld says, "Dieser Tempel Ionischer Ordnung ist der einzige Überrest eines Seleukidischen Baus in Iran, und so bedeuten die beiden Säulen einen Markstein im Siegeszug griechischer Baukunst über Iran nach Indien."² The capitals of the Persian Ionic monument are of a squarish, debased type with a tightly-wound spiral, as in the capitals of a rock-cut tomb discovered last year at Quizquapan in Kurdistan.³ This latter monument may well enable us to date the shrine at Khurha, which Professor Herzfeld tentatively assigns to the Seleucid Period.⁴ The rock-cut capitals in Iraq have a palmette between the volutes and above the capital itself, a thin abacus ornamented with an egg and tongue pattern. The remains of figure sculpture framed by the two columns that enclose the entrance

¹ Gen. E von Houtum-Schindler, *Eastern Persian Irak* (Publication of the Royal Geographic Society), London, 1897, pp. 98 ff.

² Herzfeld, *op. cit.*, p. 32. The existence of such an Iranian prototype is suggested by H. Luders in his article, "Die Ausgrabungen in Taxila," *Deutsche Literatur Zeitung*, 1924, p. 1163.

³ Edmonds, *op. cit.*

⁴ Herzfeld, *loc. cit.*; F. Sarre, *Die Kunst des alten Persien*, Berlin, 1922, p. 24.

of the tomb, are highly significant for establishing the chronology. On either side of a fire-altar like those on the tombs at Naqsh-i-Rustem are the figures of Zoroastrian priests, their mouths veiled and holding bows. The closest parallel to this sculpture, in style as well as subject, is a panel of Seleucid date from Erghili in the museum of Constantinople, representing officiants at a fire-altar, and probably from a similar tomb.¹ Although the figures at Quizquapan are in the style of the reliefs at Persepolis, some parts of this carving, such as the figure of Ahuramazda, differ somewhat from the Achaemenid type, and this, in conjunction with the Ionic capitals, would lead me to date the whole composition in the Seleucid Period, perhaps as early as the third century, when classical elements, as in the Erghili relief, merged with the earlier style. The comparative crudity of the capitals at Khurha leads me to date this temple late in the Seleucid Period, that is, shortly before 250 B.C., if not actually in the time of the Philhellenic Parthians, in any case, earlier than the temple at Jandial. The Greek plan of this latter monument at Taxila, the comparative purity of the bases of the columns and of the lower moulding of the walls, and also the method of joining the drums with dowels—are all elements which would lead us to believe that the work was almost certainly done under Greek supervision, or perhaps by actual Greek workmen, probably, as we shall see, in the period of Parthian domination.² The fact that the capitals and bases as well are closer to the classic Ionic than the Persian examples can only be explained by the presence of Western architects, but, in view of the further evidence which follows, cannot be used as an argument for an earlier date. That the temple was built no later than the Parthian Period, that is, no later than the first century A.D., is suggested by the relation to the capitals in Iraq and Persia, and by the character of the masonry in the chronology of successive types of building materials evolved by Marshall.³ It might be possible, then, to date the Jandial temple in the period immediately succeeding the Parthian invasion, when we would expect to find a mixture of Greek and Persian forms. The Parthian raid, which ended the rule of the house of Demetrius in Taxila, took place in the reign of Mithradates II (123–88 B.C.).⁴ From the internal evidence, and, as will be seen, from the possible association



FIG. 4.—IONIC COLUMNS, KHURHA

¹ Th. Macridy, "Reliefs Gréco-Perses de la Région de Dascylion," *B.C.H.*, 1913, p. 353.

² That workmen of Greek origin were active in India as late as the first century A.D. is indicated by the signature of a certain Agiselas on the reliquary of King Kanishka. (Cf. A. Foucher, *L'Art Gréco-Bouddhique du Gandhara*, II, 2, Paris, 1922, p. 531).

³ Marshall, *op. cit.* p. 13.

⁴ Sten Konow, *Kharosthi Inscriptions, Corpus Inscriptionum Indicarum*, II, 1, Oxford, 1929, p. xxxi.

of the temple with a Persian cult, it is probable that it was built immediately after this invasion, that is, in the reign of Maues or of Azes I. The latter presumably, reigned from 90 to 58 B.C.; in 72 B.C. Maues was in Seistan. In support of this dating, it will be remembered that Cunningham found a single coin of Azes I in the rubbish which he cleared away in his superficial exploration of the Jandial mound.¹

Although there is nothing to indicate that this temple was dedicated to Alexander and Porus, as Apollonius of Tyana asserts, I am inclined to agree with Sir John Marshall that this is the actual site visited by the Cappadocian traveller in the first century A.D.² So close is Apollonius' description of the shrine to what was actually found that we must for once, I believe, give credit to this usually untrustworthy authority. The metal reliefs that he saw with scenes of the struggle between Alexander and Porus were possibly gilded stuccoes of the type so lavishly employed in the later architecture of Taxila and Hadda. It will be seen that if we may trust Apollonius, his visit furnishes us with a terminus ante quem for the building of the temple, that is 44 A.D.

A local tradition has it that the columns at Khurha once supported a dome;³ this suggestion makes us think immediately of Marshall's speculations in regard to the Jandial temple, the "parthenon" of which, he concluded from the presence of deep foundations and the heavy deposit of wood ash discovered in the ruins, must have been surmounted by a heavy superstructure. The steps leading upward from this chamber further indicated the presence of a tower or "ziggurat".⁴ The total absence of images of any kind precludes the possibility that this shrine was dedicated to the worship of Buddhist, Hindu, or Jain divinities, and attracts us to Marshall's theory that the Jandial temple was dedicated to fire-worship.⁵ If we may credit the local legend, it seems likely that something of the sort must have existed at Khurha too; therefore, although it is decidedly speculative, this monument appears to have been devoted to fire-worship and not, as Herzfeld suggests without offering any explanation, to Dionysos.⁶ It would be very natural to suppose that the type of fire-temple favored in Persia, the homeland of Zoroastrianism, would be the most likely to be introduced into Northern India to serve the adherents of the same faith, a faith which must, as Marshall maintains, have flourished in the Parthian Period.⁷ The presence of the Ionic order on the tomb of the fire-worshipper in Kurdistan strengthens the theory that this Grecian order may well have been regularly employed by Zoroastrians for their monuments both in Persia and India.⁸ In support of the dating

¹ General Sir Alexander Cunningham, *A.S.I.* II, p. 131.

² Sir John Marshall, *A Guide to Taxila*, Calcutta, 1918, pp. 93-94. Cunningham was also under the impression that his vihara was the shrine visited by Apollonius. The location of the Jandial temple on a promontory overlooking the city gate coincides with Apollonius' description and seems to justify Marshall in his claim. Cf. Philostratus, *Apollonius*, II, 20.

³ Houtum-Schindler, *op. cit.*, p. 99.

⁴ Marshall, *A.S.I.*, *Annual Report*, 1912-13, I, p. 36.

⁵ The only critic who believes the Jandial temple to have been dedicated to Buddhism is G. N. Banerjee (*Hellenism in Ancient India*, London, 1920, p. 44).

⁶ Herzfeld, *Illustrated London News*, Feb. 11, 1928, p. 240.

⁷ In support of Marshall, cf. Strabo, 15, 714, on the custom of exposing the dead to vultures—a sure indication of the presence of a Zoroastrian colony at Taxila.

⁸ It would seem likely that, in the Hellenistic period, buildings of a Greek type would have supplanted the traditional form as seen in the ruins at Atash Kadah, near Ispahan (A. V. W. Jackson, *Persia Past and Present*, New York, 1906, pp. 253 ff.).

proposed in an earlier paragraph, there is the evidence that fire-worship was introduced into India even before the founding of the Maurya empire;¹ its survival side by side with Buddhism in the early centuries of the Christian Era is attested by the many representations of fire-altars on the Graeco-Buddhist reliefs of Gandhara. Furthermore, we know from the inscription on the column at Besnagar dedicated by an Indo-Greek sovereign to Garuda that the Greeks in India adopted the Brahmanic faith,² and so it does not seem impossible that the Jandial temple may even have been the offering of a Greek convert to Zoroastrianism, perhaps even earlier than the first century B.C.

General Cunningham, with all the enthusiasm of the pioneer, was sure that, in the vihara at Mohra Maliar, he had discovered a unique example of Greek architecture in India. A glance at the illustration of the Ionic column from this site (Fig. 5) is sufficient to convince us that this example is even further removed from the Ionic of Greece than the fragments at Jandial. In fact, the heavy impost blocks suggest the form later developed in Byzantine architecture. The columns as a whole must have been very squat in proportion. The capital itself consists of a curiously undercut and projecting echinus with Ionic scrolls attached on two faces of the block, the scrolls being tied in at the middle like rolls of parchment, as in the capitals at Khurha. The disc-like volutes, lacking all trace of the spiral so prominent at Khurha, the protruding echinus, as well as the abacus block, have almost exact parallels in the stucco capitals from Assur of the Parthian Period³ (Fig. 6). The strong resemblance between these architectural elements confirms the close connection with Parthia in the reign of Azes I, twelve of whose coins were discovered in the foundations of the building at Mohra Maliar.⁴ This evidence is in exact opposition to Marshall's statement that "whereas the coins of the Indo-Parthians evince a close dependence on Parthian prototypes . . . the contemporary architecture . . . shows little evidence of the semi-barbarous influence from that region."⁵ If we are to judge from the numis-



FIG. 5.—IONIC COLUMN FROM MOHRA-MALIAR
(Central Museum, Lahore)

¹ D. B. Spooner, "The Zoroastrian Period in Indian History," *Journal of the Royal Asiatic Society*, London, 1915, pt. 2, pp. 405-455.

² J. H. Marshall, "Notes on Archaeological Exploration in India," 1908-09 (Inscriptions from a pillar at Besnagar), *Journal of the Royal Asiatic Society*, London, 1909, pt. 2, pp. 1053 ff.

³ W. Andrae, H. Lenzen: "Die Partherstadt Assur," *Wissenschaftliche Veröffentlichung der Deutschen Orient-Gesellschaft*, 57, Leipzig, 1933, Taf. 19. a) 15568; *Mitteilungen der Deutschen Orient-Gesellschaft*, 1909, Abb. 13, p. 48.

⁴ General Sir Alexander Cunningham, *op. cit.*, V, p. 72 and p. 190.

⁵ E. J. Rapson, *The Cambridge History of India*, vol. I, Cambridge, 1922, p. 646.

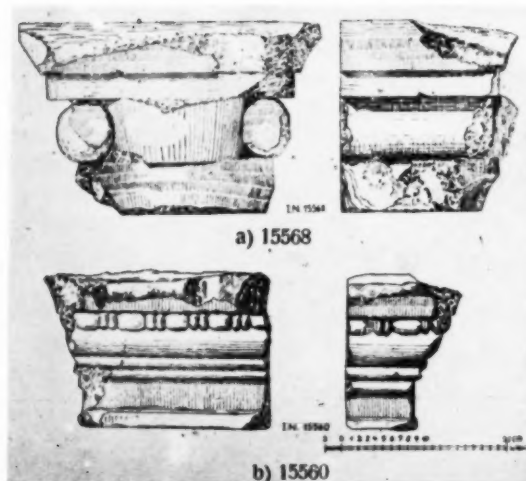


FIG. 6.—"PARTHIAN-IONIC" CAPITALS, ASSUR
(From Andrae, *Die Partherstadt Assur*)

columns in India suggests that, with the passing of the last generation of Greeks in India, the Ionic order disappeared, to be replaced by the countless examples of strongly Roman Corinthian capitals that are employed exclusively in the decoration of the Buddhist monuments of Gandhara.

Until scientific excavation uncovers the cities of the Hellenistic empire in Persia and India this is as far as we can carry the study of Ionic architecture in the East. In this connection it may be asked why no earlier monuments of Greek art have been found either in India or Persia. For India the reasons are obvious: the interval between Alexander's conquest of the Punjab and the withdrawal of Seleucus Nicator beyond the Khyber Pass is too short for the formation of any sort of an artistic tradition; only with the invasions of Euthydemus and Demetrius of Bactria, in the early second century B.C., was this region again under Greek influence. There followed a struggle for power between the satraps of Taxila and the Kabul Valley; the Parthian invasion already mentioned brought peace to Taxila for about one hundred years. It is in this interval, the period suggested for the temples at Taxila, that, with the collaboration of the Asiatic Greeks and under stimulus from the West, the first concrete results of Alexander's career of conquest appear in the Orient. In Persia the appearance of examples of purely Greek sculpture suggest that, with the investigation of the great sites of the Seleucid period, we may complete the story of Hellenism in the East, known now only by such isolated phenomena as the Ionic monuments discussed in this paper. The great importance of these shattered temples lies in the fact that they demonstrate how much greater than its political and economic effect was the cultural influence of Alexander's march to the Hydaspes, how great was the appeal of Greek forms of abstract beauty to the oriental mind where the Greek athletic ideal could find no response.

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matic evidence, we might be justified in assigning the building to the reign of the Indo-Parthian Azes I. To be thoroughly realistic, however, we must admit that, as always, all that a coin deposit can tell us beyond reason of doubt is that the building was not built before the ruler whose money is found on the site. The factors that support the date in the reign of Azes I are, first of all, the purity of the bases, the stylistic resemblance to the Ionic from the palace at Assur, which probably dates from the same period, and, lastly, the fact that these columns and the pronaos of Jandial are the only Ionic

PARTHENON I, II UND III

ÜBER die beiden älteren Tempel unter dem als Parthenon III bezeichneten berühmten Marmorbau des Perikles habe ich in den *Ath. Mitt.* 1892, S. 158 ff., 1902, S. 379 ff. und 1911, S. 49 ff. geschrieben und dargelegt, dass es sich bei beiden um nur begonnene Bauten handelt, von denen der ältere aus Kalkstein (Poros), der jüngere aus Marmor erstellt werden sollte. Eine Einstimmigkeit der Forscher über die Erbauungszeit, die Gestalt und die Geschichte dieser zwei alten Tempel ist bisher nicht erzielt worden. Neuestens hat W. B. Dinsmoor in dieser Zeitschrift (1934, S. 408–448) über "The Date of the Older Parthenon" geschrieben und eine Ansicht aufgestellt, die er schon früher (*Art and Archaeology* XIV, 1922, S. 236 f.) kurz ausgesprochen hatte.

Ich habe meine davon abweichende Ansicht über die Geschichte der drei Tempel vor einigen Jahren in einer grösseren Arbeit dargelegt, die für die Zeitschrift "Athenische Mitteilungen," bestimmt, aber zu umfangreich geworden war, und die daher nunmehr in einem besonderen Buche veröffentlicht werden soll. Da dieses aber erst 1936 zur Ausgabe kommen kann, weil mein Buch, *Alt-Olympia*, 1935 erscheint, so halte ich es für notwendig, hier sofort die wichtigsten Gründe mitzuteilen, die mir gegen die Ansichten Dinsmoors zu sprechen scheinen.

I

Auf die historische Einleitung Dinsmoors, die sich mit dem Wechsel der Ansichten über die älteren Reste unter dem Parthenon des Perikles beschäftigt, möchte ich nur in einigen Punkten eingehen. Er hat nicht genügend hervorgehoben, dass die älteren Gelehrten, welche vor mehr als 50 Jahren über den von L. Ross entdeckten Bau unter dem Parthenon geschrieben hatten, der Ansicht sein mussten, dass der unter dem Parthenon liegende Tempel vor den Perserkriegen der Haupttempel der Athena auf der Akropolis gewesen war und einst die Gebälke und Säulen getragen hatte, die als Zeichen der Perser-Zerstörung in der nördlichen Burgmauer verbaut sind. Nachdem ich aber 1885 die ebenfalls von L. Ross freigelegten Mauern südlich vom Erechtheion als Unterbau eines grossen Athena-Tempels erkannt und als den vorpersischen Haupttempel der Göttin nachgewiesen hatte, durften die unter dem Parthenon liegenden Fundamente und Stufen nur noch als die Reste eines geplanten und nur angefangenen neueren Athena-Tempels gelten.

Bei der Erklärung und der Datierung dieser Reste ist ferner zu beachten, dass alle Archäologen, welche bei den Grabungen südlich und östlich vom Parthenon von 1885 ab zugegen waren, annehmen mussten, dass die zerschlagenen Bauglieder und Bildwerke, welche die südlich vom Tempel angeschüttete Terrasse ("II" auf den Abb. 1 und 2 bei Dinsmoor, *A.J.A.* 1934, S. 410 f.) enthielt, von den durch die Perser zerstörten Bauwerken stammten, und sie deshalb als "Perserschutt" bezeichneten. Das tiefe Fundament des Tempels, das augenscheinlich mit jener Terrasse schichtweise in die Höhe gewachsen war, konnte daher erst nach den Perserkriegen entstanden sein.

Es war demnach eine wichtige Förderung unserer Kenntnis der Akropolis-Bauten, als ich 1902 den Beweis antrat (*Ath. Mitt.* 1902, S. 379 ff.), dass der Unterbau und die Terrasse des älteren Parthenons vor die Perserkriege fallen, und dass es sich bei diesem Tempel um eine noch unfertige, zur Zeit der Zerstörung der Burg durch die Perser im Bau begriffene Anlage handelt, die mitsamt ihrem Baugerüst aus Holz verbrannt worden war. Zu meiner Freude wurde diese Erkenntnis bald fast allgemein angenommen. Auch Dinsmoor ist ihr beigetreten.

Für die Bestimmung des Baubeginns des älteren Parthenons war es wichtig, dass ich schon 1892 und namentlich 1902 zwei Bauperioden unterschieden habe: zur ersten (Parth. I) gehören ein tiefes Quaderfundament und auf diesem Unterbau zwei noch erhaltene Porosstufen und eine — von mir ergänzte — Oberstufe (Stylobat) aus Karastein, einem Material, das bei den Bauwerken des Peisistratos vielfach vorkommt. Dieser Tempel sollte Poros-Säulen erhalten, wie sie ebenfalls unter Peisistratos üblich waren. Nach Errichtung des Fundaments wurden zweimal Änderungen vorgenommen. Ursprünglich sollte der Tempel ungefähr in derselben Höhe, wie der von mir nachgewiesene "Alte Athena-Tempel" (oder Hekatompedon) liegen und mit diesem einen fast ebenen Platz einschliessen. Man hat aber den Unterbau zweimal um je eine Quaderschicht, die als Euthynteria dienen sollte, höher gelegt. Diese Veränderungen sind schon *Ath. Mitt.* 1892, S. 165 von mir dargelegt und werden in meinem Buche genauer an der Hand von Zeichnungen und Bildern ausgeführt werden.

Sodann hatte ich eine 2. Bauperiode, einen Marmor-Tempel (Parth. II), erkannt und bewiesen, dass man noch vor der Einnahme der Burg durch die Perser angefangen hatte, auf dem fast fertigen Unterbau anstatt des Tempels aus Poros einen solchen aus weissem Marmor zu errichten. Als die Perser 480 kamen, hatte man, wie wir jetzt durch B. H. Hill wissen, über einer Stufe aus Karastein schon zwei Stufen aus Marmor verlegt und darüber die Säulen und Wände zu bauen begonnen. Diese Trommeln, Stufen und Wandquadern aus Marmor sind mit ihrem Holzgerüst von den Persern im Jahr 480 verbrannt worden. Die dabei beschädigten Steine liegen noch jetzt auf der Burg umher oder sind im Perikleischen Tempel und in der Burgmauer verbaut. Sie bezeugen zusammen mit den Brandspuren am Unterbau des Porostempels I den Brand von 480.

Es war für mich eine grosse Freude, dass die beiden älteren und unvollendeten Tempel, Parth. I als Porosbau und Parth. II als Marmortempel, sodann durch einen genauen Kenner der Akropolis, B. H. Hill, im einzelnen untersucht und veröffentlicht worden sind (*A.J.A.* 1912, S. 535 ff.). Er erkennt die beiden Tempel an und verändert meine Beobachtungen in einigen Punkten. Dem Parth. I giebt er noch eine weitere Porosstufe, was ich in meinem Buche als unrichtig nachweisen werde. Den Parth. II macht er bedeutend kleiner als den älteren Bau und zeigt auf Grund von erhaltenen Resten unwiderleglich, dass die Stufen und Säulen auf beiden Langseiten um je 2 m. und auf den Kurzseiten sogar um je 3 m. nach innen verschoben worden sind. Der ganze Tempel wurde dadurch um 6 m. kürzer und um 4 m. schmaler als Parth. I. Ich habe diese Verbesserung meiner Ergänzung von Parth. II sofort dankbar anerkannt (*Ath. Mitt.* 1911, S. 49 f.). In bezug auf die Zahl der Säulen schliesse ich mich der Annahme Hills an, dass dieser Tempel 6 Säulen an der

Front hatte; dagegen glaube ich, aus den Abmessungen der Stylobatplatten des Parth. I aus Karastein nachweisen zu können, dass Parth. I nicht, wie Hill annimmt, 6 Säulen, sondern 8 bekommen sollte.

Über die Erbauungszeit sind uns leider weder beim Parth. I noch bei II bestimmte Nachrichten überliefert. Doch giebt uns vielleicht die Geschichte der Alkmeoniden einen Anhaltspunkt. Es wird berichtet, dass sie im letzten Drittel des 6. Jahrh. den Apollon-Tempel von Delphi, der zerstört war, wieder aufzubauen unternahmen. Sie bauten dort die Fundamente der Ringhalle ähnlich, wie Peisistratos die Ringhalle des athenischen Hekatompedons hergestellt hatte, mit grossen, im Grundriss polygonalen Kalksteinen. Den Oberbau jedoch, den sie aus Poros zu erbauen übernommen hatten, stellten sie an der Vorderseite (Osten) aus weissem Marmor her. Zahlreiche Steine dieses Marmorbaus sind bekanntlich im Fundament des späteren Tempels in Delphi gefunden worden. Es liegt nun nahe, die Rückkehr der vertriebenen Alkmeoniden nach Athen um 510 mit der Umänderung des Poros-Tempels in einen Marmor-Tempel in Verbindung zu bringen. Auch schien mir schon früher die grosse Verwaltungsreform des Alkmeoniden Kleisthenes sehr wohl eine geeignete Zeit für die Wiederaufnahme eines unterbrochenen grossen Tempels zu sein. Angefangen sein musste aber dieser Bau etwas früher, nämlich in der Zeit der Peisistratiden. Da jedoch für Parth. I wegen der Fundamente aus Porosquadern die Zeit des Peisistratos selbst nicht in Betracht kommt, weil dieser, wie wir sahen, bei seinen Bauten unregelmässige Kalksteine benutzt hat, so muss man an die Nachkommen des Peisistratos denken; von seinem Enkel Peisistratos berichtet uns Thukydides (VI, 54, 6), dass er den Marmor-Altar des Apollon im Pythion und den Altar der zwölf Götter am Markt errichtet habe, zwei Altäre, die wir wahrscheinlich noch besitzen.

Auch mehrere andere Forscher haben den Parth. I dem Ende der Peisistratiden und den marmornen Parth. II der Zeit des Kleisthenes zugeschrieben; doch sind diese Zeiten nicht gesichert. Ich selbst habe daher am Ende meines Aufsatzes in *Ath. Mitt.* 1902, S. 411 f. noch eine andere Möglichkeit als denkbar und sogar als wahrscheinlicher bezeichnet, nämlich die Entstehung des Parth. II in der Zeit nach Marathon. Ich wies damals schon, ähnlich wie es jetzt Dinsmoor (S. 416) tut, darauf hin, dass in dieser Zeit auch die nachher von den Persern zerstörten Propyläen aus Marmor erbaut worden sind, und dass ferner Aristides als ἐπιμελητὴς τῶν δημοσίων προσόδων und als Archon des Jahres 489/8 für den Bau in Betracht kommen kann.

Gerade diese Datierung des Parth. II in die Zeit von 490–480 hat auch Dinsmoor angenommen und sucht sie als die einzig richtige zu erweisen, jedoch mit dem wesentlichen Unterschied, dass er den Parth. I mit seinen Porosstufen gänzlich streicht; dieser soll ein "Mythus" sein (S. 416).

Gegen eine solche willkürliche, den klaren Tatsachen widersprechende These muss ich energisch protestieren. Dies legt mir die Pflicht auf, die Unrichtigkeit von Dinsmoors Behauptung eingehender darzulegen. Der Nachweis von Parth. I als eines tatsächlich als Poros-Tempel geplanten und begonnenen Baues, der in grossen Resten erhalten ist, wird in meinem Buche ausführlich erfolgen.

II

Die zwei baulichen Hauptbeweise Dinsmoors gegen meine Ansicht sind von ihm in *Art and Archaeology*, 1922, S. 236 f. zuerst veröffentlicht und *A.J.A.* 1934, S. 416 wiederholt. Auf den ersten, dass es beim Parthenon keinen Kalkstein-Stylobat gäbe, habe ich zu erwidern, dass es zu den unbestreitbaren beiden Porosstufen von Parth. I einen Stylobat geben muss, der kaum aus diesem weichen Stein bestehen kann, sondern nur aus dem härteren Kalk von Kara; denn schon Peisistratos hat diesen für seine Porosbauten benutzt, so z.B. beim Alten Athena-Tempel und beim Olympieion. Nun haben wir eine Stufe aus Karastein, die dasselbe Profil zeigt, wie die Porosstufen, und zu diesem Porosbau gerechnet werden muss. Ich werde zeigen, dass der Karastylobat von Parth. I im Parth. II zum zweitenmal, nämlich als Unterstufe verwendet worden ist.

Zu Dinsmoors zweitem Einwand, dass die Stützmauern aus Porosquadern ("3" in seiner Abb. 1 auf S. 410) von mir zum Marmortempel gerechnet werden, obwohl dessen verbrannte Säulen darunter vorkommen, ist zu sagen, dass ich dies zwar 1902 getan habe; seitdem aber G. Kawerau gezeigt hat, dass an der Südwestecke verbrannte Trommeln von Parth. II unter der Stützmauer liegen, und seit Hills Nachweis eines gegenüber Parth. I bedeutend kleineren Tempels II habe ich diese Stützmauer zum Bau des Perikles gerechnet, wie ich unten näher zeigen werde.

An diese zwei Einwände und ihre kurze Widerlegung füge ich nun einige positive Tatsachen, durch welche die *architektonischen* Beweise Dinsmoors (S. 408 ff.) im einzelnen als unmöglich erwiesen werden.

Dass es sich beim Parthenon nicht nur um zwei, sondern um drei verschiedene Tempel handelt, zeigen jedem Fachmann die drei verschiedenen, nacheinander errichteten Unterbauten mit ihren 3 Stufen einwandfrei. In meiner Abb. 1 sind von links nach rechts die Unterbauten von Parth. I, II und III von Hans Schleif gezeichnet; alle Durchschnitte sind an der Südseite des Tempels genommen, weil nur hier die 3 nacheinander erbauten Tempel in Resten erhalten und deutlich zu erkennen sind. In den Durchschnitten sind die Steinschichten am rechten Rande mit den Zahlen 1-9 in Kreisen angegeben.

Parthenon I zeigt die bereits erwähnten Quaderschichten, nämlich die Abgleichschicht (Euthynteria) (E) des Fundaments, die 2 Stufen (1 und 2) aus Poros und die — von mir ergänzte — oberste Schicht (3) aus härterem Stein (Kara-Kalk). Letztere ist später nach rechts verschoben und als Unterstufe des Parth. II (a) verwendet worden, wobei einige Steine wahrscheinlich halbiert worden sind. Die drei Stufen des ältesten Tempels weisen dieselbe reiche Profilierung auf, entstanden durch einen doppelten Werkzoll, der später abgearbeitet werden sollte. Dass auf den Stylobat aus Karastein Säulentrommeln aus Poros gelegt werden sollten, kann nicht zweifelhaft sein; dagegen sind die Durchmesser und Achsweiten dieser dorischen Säulen nicht bekannt.

Soweit war der Tempel I gebaut, als die Athener sich entschlossen, ihn in Marmor statt in Poros zu errichten. Auch den schon ausgeführten Stufenbau beschlossen sie in Marmor zu erneuern, dabei aber die seitherige Oberstufe aus Karastein als unterste Stufe des neuen Marmortempels zu verwenden. Es ist das Verdienst von Hill,

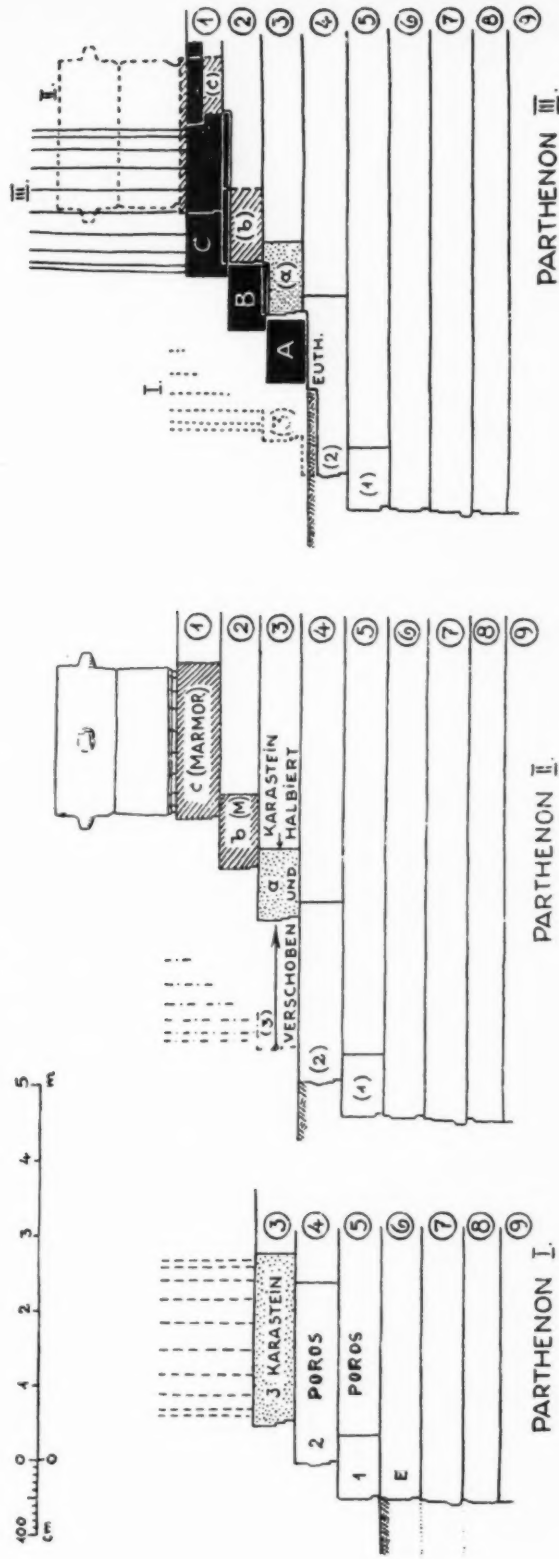


ABB. 1.—STUFENBAU DER DREI PERIODEN DES PARTHENONS

H.S.

erkannt zu haben, dass dieser Tempel bedeutend kleiner geplant wurde, als der ältere Porostempel.

Parthenon II hatte also nach Hill und mir über einer Unterstufe aus Kara (a) zwei Stufen aus Marmor (b und c), deren Lage — um 2 m. nach Norden verschoben — von Hill richtig erkannt worden ist. Dass so der Unterbau von Parth. II unter zwei marmornen Stufen eine dritte aus Kalkstein besass, darf keinen Anstoss erregen; denn dasselbe kommt auch beim Hephaistos-Tempel (Theseion) vor.

Auf dem Marmorstylobat waren die Säulen, wie Standspuren zeigen, bis mindestens zur Höhe von 2 marmornen Trommeln aufgerichtet. Diese sind an mehreren Stellen der Burg als vom Feuer beschädigte und daher später als Füllmaterial verwendete Steine zutage gekommen. Die unteren Trommeln zeigen an ihrem unteren Ende 20 angearbeitete Kanneluren (s. Abb. 1, Mitte) und haben im übrigen, ebenso wie die zweiten Trommeln, einen rauhen Mantel als Werkzoll und viereckige Bossen zum Heben.

Parthenon III hat drei, in Abb. 1 rechts in schwarz angelegte Marmorstufen (A, B und C). Sie liegen alle drei in derselben Höhe, wie die drei Stufen (a, b und c) des Tempels II. Die Zeichnung lässt ferner erkennen, dass der unterste Stufenstein (A) leicht herausgebrochen werden konnte, wie es mit einem Stein am westlichen Ende der Südseite geschehen ist. Dort konnte der Karastein (a) schon früher als Stufenstein erkannt werden. Wir verdanken, wie schon gesagt, B. H. Hill die Erkenntnis, dass er noch an seiner alten Stelle im Tempel II liegt; doch erwähnte ich bereits, dass er hier zum zweitenmal verwendet ist und ursprünglich zum Tempel I als Stylobat gehört hat. An der Nordseite sind bekanntlich die Säulen von Parth. III gegen die von II bedeutend nach Norden verschoben.

Inbezug auf die Höhenlage der 3 Tempel mag schliesslich noch betont werden, dass für den Tempel I zuerst die Quaderschicht 8 die Euthynteria sein und mit ihrer Oberkante den äusseren Fussboden südlich bilden sollte, eine Höhe, die ungefähr mit dem Boden um den Alten Athena-Tempel (Hekatompedon) übereinstimmte. Während der Ausführung des mächtigen Unterbaus ist dann, wie schon erwähnt, zweimal eine Höherlegung des äusseren Bodens um je eine Steinschicht erfolgt, so dass schliesslich Schicht 6 die Euthynteria des Poros-Parthenons wurde, wie unsere Abb. 1 links zeigt. Für den Tempel II ist sodann der äussere Boden um 2 Schichten höher angesetzt worden, so dass Schicht 4, die Mittelstufe von Tempel I, zur Euthynteria bestimmt wurde. Im Parth. III schliesslich ist die Höhe des Bodens nicht mehr verändert worden. Da er aus Erde bestehen sollte, ist im Süden die alte Schicht 4 und im Nordosten der Fels etwa 0.15 m. tief zur Aufnahme einer Erdschicht roh abgearbeitet worden; nur ein handbreiter Streifen der Oberfläche blieb als sichtbarer Teil der Euthynteria stehen. An der Nordostecke sollte nach dem ersten Plane der Felsboden um 4 Schichten, also um mehr als 2 m. tiefer abgearbeitet werden. Die ganze Burgfläche beim Alten Athena-Tempel und Parthenon hätte dann eine fast horizontale Fläche gebildet, über die nur das Heiligtum des Zeus Polieus auf der höchsten Stelle der Burg nordöstlich vom Parthenon herausgeragt hätte.

III

Diese baulichen Tatsachen machen es unverständlich, wie Dinsmoor den älteren Porosbau I ganz leugnen kann. Er ist hier R. Heberdey gefolgt, der ebenfalls die beiden von mir und Hill nachgewiesenen Tempel I und II in *einen* Bau vereinigt, dazu aber noch – worin ihm Dinsmoor nicht beistimmt – den gewaltigen Unterbau von Tempel I, der noch heute mit 2 richtigen Stufen endet, für ein sichtbares „Podium“ des Marmorbaus erklärt hat (*Altattische Porosskulptur*, 1919, S. 231 ff.). Eine solche Annahme ist aus mehreren Gründen unzulässig. Erstens kann das sog. Podium zu keiner Zeit sichtbar gewesen sein, sondern in allen 3 Tempeln sollte der Unterbau mit Erde bedeckt werden. Zweitens wäre die Herstellung eines solchen bis zu 9 m. Tiefe fundamentierten Unterbaus an der Südseite geradezu sinnlos gewesen, wenn er nicht den Zweck gehabt hätte, unmittelbar die südliche Ringhalle zu tragen. Drittens ergibt sich die Tatsache, dass der Unterbau nie sichtbar sein sollte, einmal aus den offenen Vertikalfugen des ganzen Quaderbaus, sodann aus dem bei der Ausgrabung festgestellten Befund, dass die Quaderschichten des Unterbaus gleichzeitig mit den angeschütteten Erdmassen der südlichen Terrasse in die Höhe gewachsen sind. Endlich mag noch erwähnt werden, dass es meines Wissens keinen altgriechischen Tempel mit einem Podium giebt; der einzige Tempel mit einem Podium auf allen Seiten, den man anzuführen pflegt, der von Neandria in der Troas mit den seltsamen äolischen Kapitellen, beruht auf einer falschen Erklärung von R. Koldey (Neandria, Winkelmannprogramm, 1891); er war in Wirklichkeit ein Ringhallentempel mit einfachen äolischen Volutenkapitellen im Äusseren, während die runden Kapitellteile zum Innern des Tempels gehören.

Heberdey irrt ferner darin, dass er die angeschüttete Terrasse mit der polygonalen Kalksteinmauer für eine grosse doppelte Rampe hält; das ist technisch unhaltbar. Richtig ist dagegen die von Dinsmoor wiederholte Angabe Heberdeys, dass die beiden bereits erwähnten Terrassenmauern aus Porosquadern vor der SW- und SO-Ecke des Parthenons nicht zu diesem Tempel gehören, wie ich *Ath. Mitt.* 1902, S. 398 (mit Abb. 5; darnach Dinsmoor Abb. 2, S. 411) angenommen hatte. Heberdey und Dinsmoor folgen in der Verwerfung dieser meiner Ansicht G. Kawerau, der dies zuerst als unhaltbar bezeichnet hatte (*Die Ausgrabung der Akropolis*, 1907, S. 118 ff.), weil unter der dreieckigen Stützmauer aus Poros vor der SW-Ecke des Tempels verbrannte Säulentrommeln aus Marmor vom Parth. II verbaut sind. Diese Beobachtung Kaweraus, die ich seinerzeit selbst mit ihm gemacht hatte, hat mich selbstverständlich längst veranlasst, meine Ansicht über die Zeit dieser Stützmauer zu verbessern. Diese Mauer mit ihrer Terrasse, ebenso die nach Osten sich anschliessende Erhöhung der pelasgischen Mauer und auch die vor der SO-Ecke des Tempels liegende Quadermauer gehören unmöglich zum Parthenon II, sondern stammen aus der Zeit des Beginns des Perikleischen Baues.

Damals war die von Kimon erbaute Burgmauer noch unvollendet und nicht hoch genug, um die vielen Schuttmassen südlich vom Parthenon zu stützen. Da ihre Fertigstellung noch viele Jahre erforderte und zu ihrer Hinterfüllung noch grosse Schuttmassen nötig waren, die erst während des Baus des Parthenons III und seiner Umgebung allmählich gewonnen werden konnten, hat man um 450 zunächst

jene drei Quadermauern aus Poros erbaut, um einen grösseren Werkplatz im Süden des Tempels für den beabsichtigten Neubau zu errichten.

Für den Parth. II war eine solche Erweiterung und Erhöhung des Arbeitsplatzes nicht nötig. Ich hatte sie jedoch angenommen, weil ich diesen Tempel unmittelbar auf dem Stufenbau von Parth. I erbaut glaubte. Nachdem aber Hill gezeigt hatte, dass der Marmortempel bedeutend kleiner war und an der Südseite um 2 m., an der Ost- und Westseite je um 3 m. gegen den Unterbau von Parth. I zurücksprang, war die Annahme einer Erweiterung der Arbeitsterrasse an der Südseite und namentlich an der SW-Ecke nicht mehr nötig. Bei Wiederaufnahme des Tempelbaus nach den Perserkriegen, also um 450, lagen die Verhältnisse jedoch anders. Man plante wieder einen grösseren Bau und verschob die südliche Säulenreihe ein wenig nach Süden, die westliche Reihe aber wieder bis an den Westrand des grossen Unterbaus. Jetzt war an der S W-Ecke kein Umgang als Arbeitsplatz mehr vorhanden, weil die pelasgische Mauer hier dicht an der Tempelecke lag. Um hier einen freien Umgang zu schaffen, erbaute man jetzt jene merkwürdige dreieckige Quadermauer, die ausserhalb der uralten Burgmauer lag und sich auf den untersten Teil der Kimonischen Burgmauers stützte. Erst am Ende der Bauzeit von Parth. III, als die zahlreichen Marmorsplitter vom Tempelbau und das Material des an der NO-Ecke und an der Westseite des Tempels abgearbeiteten Felsens untergebracht werden musste, ist der Oberteil der Kimonischen Burgmauer zur Aufnahme dieser Massen erhöht worden.

Die Erbauungszeit der dreieckigen Südwest-Terrasse und der nach Osten sich anschliessenden Quadermauern aus Poros hat also mit der Zeit des Parth. II nichts zu tun, sondern fällt mit dem Beginn der Perikleischen Bauperiode zusammen. Damit erledigt sich der wichtigste der beiden weiter oben erwähnten und bereits kurz widerlegten Einwände Dinsmoors gegen meine Ansicht über die drei Bauperioden des Parthenons. Alle meine anderen Beweise bleiben in voller Kraft bestehen und sind durch Hills Nachweis geradezu bekräftigt worden.

IV

Diesen architektonischen Hauptbeweis für die Erbauung eines einheitlichen älteren Parthenons und zwar in den Jahren nach der Schlacht bei Marathon sucht Dinsmoor noch durch einen archäologisch — keramischen und einen astronomischen Beweis zu stützen. Ich werde zeigen, dass beiden keine bindende Kraft zukommt.

Über den *archäologischen* Beweis ist zunächst allgemein zu sagen, dass es sich um einen Zirkelschluss handelt. Denn seit den Beobachtungen von Ross und Wolters auf der Akropolis ist, wie alle Archäologen wissen, das absolute Alter der rotfigurigen Vasenmalerei abhängig gerade vom Alter des Parthenons, nachdem diese festgestellt hatten, dass rotfigurige Scherben schon in der Erde vorkommen, die vor Errichtung des Parthenons I den Boden der Akropolis gebildet hatte.

Im einzelnen hat Dinsmoor (S. 416–441) durch sorgfältige Zusammenstellung der Scherbenfunde, die in den Erdschichten südlich und östlich vom Parthenon I gemacht worden sind, die Zeit dieses Tempelbaus zu bestimmen gesucht. Er stützt sich dabei auf die Beobachtungen, die von P. Kavvadias und P. Wolters gemacht worden sind, wobei letzterer von mehreren anderen deutschen Archäologen, wie B.

Graef, P. Hartwig, R. Zahn und anderen unterstützt worden ist. Veröffentlicht sind diese Beobachtungen und die Scherben in dem Werke von Graef und Langlotz, *Die Vasen von der Akropolis zu Athen*, 2 Bände, 1909–1933.

Ich behalte mir vor, in meinem Buche über die Haupttempel der Akropolis auf die verschiedenen Schuttschichten und deren Inhalt an Topfware und Skulpturresten näher einzugehen und ihr Alter, soweit es gesichert ist, zur Zeitbestimmung des ältesten Parthenons zu benutzen. Hier muss ich in bezug auf die Ausführungen Dinsmoors mich darauf beschränken, kurz zu zeigen, dass ich diese nicht für richtig halte.

Gewiss ist es zutreffend und auch von mir wiederholt betont worden, dass die jüngsten Funde der einzelnen Schichten für deren Datierung maassgebend sind. Beim Parth. I handelt es sich namentlich um die schwarze Humusschicht unmittelbar auf dem Burgfelsen, die nur Gegenstände liefern kann, die der Zeit vor Beginn des Tempelbaus angehören, und sodann um die Erd- und Bauschutt-Schichten, die mit dem Tempelfundament in die Höhe gewachsen sind, deren jüngste Scherben daher aus der Zeit des Baus stammen müssen.

Auf die Skulpturreste geht Dinsmoor nicht ein, sondern behandelt nur die Vasenscherben, die in beiden Schichten sich fanden, und namentlich die rotfigurigen, weil ihre Zeit genauer bestimmt werden kann, als die der schwarzfigurigen. Er zählt mehrere Scherben auf, die noch dem 6. Jahrh. angehören, und nennt eine Scherbe (S. 438), die nach Langlotz dem Anfang des 5. Jahrh. (zwischen 500 und 490) angehören soll. Diese einzige Scherbe (abg. S. 438: II 731), gefunden in der untersten, "der Fundamentierung des Parthenons gleichzeitigen Schicht" und das jüngste Stück, mit dem die Reihe "abrupt abbricht," genügt ihm als Beweis für die Erbauungszeit eines älteren Tempels, die um 490 beginne. Ich frage: Ist diese Datierung richtig?

Vor allem muss deutlich betont werden, dass die absolute Zeit der rotfigurigen Vasen durchaus nicht so sicher feststeht, dass danach der Parth. I und II zeitlich bestimmt werden können. Die Schätzung des Alters einer rotfigurigen Scherbe durch Langlotz ist kein fester Punkt, auf dem die genaue Baugeschichte des Parthenons aufgebaut werden darf.

Es ist bekannt, wie sehr die Altersbestimmung der rotfigurigen Vasen und der älteren Vasenarten geschwankt hat und noch heute schwankt. Während A. Furtwängler in seinen *Bronzen aus Olympia* (1879, S. 6 Anm. 1) es noch für befremdlich hielt, dass die von Ross beobachteten Scherben älter als 480 sein sollten, und sie erst der Zeit vor Beginn des Perikleischen Baus zuteilte, schreibt z.B. E. Buschor (*Griech. Vasenmalerei*, 1913, S. 160) die rotfigurigen Vasen der Zeit von 530–480 zu. Ich selbst trage kein Bedenken, sie noch weiter, etwa bis 550, hinaufzurücken, wie ich auch die korinthischen und die Dipylon-Vasen zeitlich bedeutend früher ansetze (*Alt-Olympia*, 1935, Abschn. XIII).

Dazu kommt noch, dass zu der Zeit, als P. Wolters und seine Mitarbeiter das Alter der beim Parth. gefundenen Vasenscherben bestimmten, sie noch die falsche Ansicht hatten, dass es sich bei dem Inhalt der Parthenon-Terrasse um Perserschutt handle, eine Ansicht, die von allen Archäologen und so auch von Dinsmoor aufgegeben ist.

Ich kann also den Darlegungen Dinsmoors über die Vasenfunde der Parth.-Terrasse und ihre Verwertung zur Datierung keine entscheidende Bedeutung gegenüber den architektonischen Tatsachen beimessen.

Ich halte es für unzulässig, aus der allgemeinen Datierung von Vasengruppen einen Schluss zu ziehen auf das Alter des Parthenons I und der Terrasse südlich von ihm. Ich kann einen solchen Schluss um so weniger zugeben, als Dinsmoor den Unterbau und die Terrasse des Parth. I fälschlich in die Zeit des Tempels II setzt. Der Beginn von Parth. I ist eine Zeitspanne von dem von II getrennt, eine Spanne, die nicht zu kurz bemessen werden darf, da man in ihr zunächst den gewaltigen Unterbau errichtete, sodann zweimal eine Änderung vornahm und schliesslich den Entschluss fasste, den begonnenen Poros-Tempel durch einen kleineren Marmorbau zu ersetzen. Dass der marmorne Tempel II nach Marathon geplant und begonnen worden ist, habe ich schon 1902 nicht nur als möglich, sondern auch als wahrscheinlich bezeichnet. Dass dagegen der Parth. II und auch Parth. I in der Zeit von 490–480 errichtet sein sollen, wie Dinsmoor glaubt, halte ich für unmöglich. In der Zeit, als die ioni-schen Städte Kleinasiens zerstört und die Perser bei ihrem Zug nach Griechenland bei Marathon von den Athenern besiegt worden waren, durften die Athener noch nicht an die Beseitigung der Persergefahr glauben und mussten an die Erbauung einer Kriegsflotte und an die Befestigung ihrer Stadt denken. Ich halte es mit fast allen Archäologen nicht für möglich, dass sie damals, als sie mit einer Wiederkehr der Perser rechnen mussten, die Errichtung des gewaltigen Poros-Tempels geplant und seinen Unterbau errichtet haben und dann noch, als sie kurz vor 480 die gewaltigen Vorbereitungen der Perser zu einem zweiten Zug erfuhren, beschlossen haben sollen, den Poros-Tempel zwar etwas kleiner, aber in Marmor zu erbauen.

Wenn Dinsmoor, um diese Hindernisse zu beheben, den Poros-Tempel ganz leugnet, so scheint mir das nicht erlaubt, weil, wie ich gezeigt habe, die vorhandenen Porosstufen und der Unterbau deutliche Zeugen des grossartigen Bauwerkes sind. Dazu kommt, dass die Zerstörung mehrerer alter Tempel, deren zerschlagene Bauglieder und Bildwerke in der Terrasse von Parth. I stecken, mit dem Plane einer Um-mauerung der Unterstadt und mit der Verlegung des phönikischen Stadtteiles Me-lite an den Ilissos vielleicht in Verbindung gebracht werden darf, wie ich in Beigabe II meines Buches *Alt-Olympia* darlege.

Ähnlich steht es mit dem *astronomischen* Beweise Dinsmoors. Er geht dabei von der umstrittenen Voraussetzung aus, dass die griechischen Tempel im allgemeinen nach dem Sonnenaufgang am Hauptfesttag des betreffenden Gottes gerichtet oder "orientiert" seien, eine These, die namentlich H. Nissen in seinem Buche *Orienta-tion* vertreten, die aber viel Widerspruch gefunden hat. Auch ich teile die Ansicht Nissens, aber mit dem Unterschied, dass ich nicht den astronomisch berechneten, gar nicht zu beobachtenden Aufgang der Sonne, sondern ihr wirkliches Erscheinen auf dem Tempelplatz, also beim Parthenon ihr Aufsteigen über dem Hymettos in Betracht ziehe.

Dinsmoor glaubt dagegen, dass der mathematisch bestimmte Sonnenaufgang am Panathenäenfest der Berechnung zu Grunde gelegt werden müsse und die Achse des älteren Parthenons am 31. August 488 auf diesen nicht sichtbaren Punkt gerichtet

gewesen sei; daher müsse der Tempel an diesem Tage vom Architekten abgesteckt worden sein.

Ich will hier kein Gewicht darauf legen, dass der gewaltige Unterbau aus Poros gar nicht für den Marmor-Tempel II, sondern für den Parthenon I bestimmt war, und dass es für mich ganz undenkbar scheint, dass der Unterbau für den Tempel erst am 31. August 488 begonnen und einschliesslich der Porosstufe errichtet worden, und dass dann noch vor der Ankunft der Perser im Jahre 480 die Erbauung eines kleineren Marmor-Tempels beschlossen und zum Teil ausgeführt worden ist.

Hier soll nur ein Doppeltes noch kurz eingewandt werden. Es ist nach meinem Wissen wegen der Einfügung von Schaltmonaten gar nicht möglich zu bestimmen, dass der Haupttag der Panathenäen am 31. August 488 gefeiert worden ist. Sodann kommt bei meiner Ansicht über die Orientierung der Tempel nach dem wirklichen Erscheinen der Sonne über dem Hymettos ein ganz anderes Jahr heraus, da der wirkliche Aufgangspunkt der Sonne weiter südlich liegt als der mathematisch errechnete. Es mag noch hinzugefügt werden, dass das Jahr 488 gar keine grossen Panathenäen hatte, diese vielmehr 490 und 486 stattfanden. Den astronomischen Darlegungen Dinsmoors kann ich hiernach gegenüber den für mich feststehenden baulichen Tatsachen keine Beweiskraft beimessen.

WILHELM DÖRPFELD

LEUKAS-ITHAKA

MÄRZ 1935

THE OLDER PARTHENON: ADDITIONAL NOTES

THROUGH the kindness both of Professor Dörpfeld and of the Editor of this JOURNAL, I have been permitted to see the foregoing article before publication, and to make a few comments thereon. Detailed discussion of Professor Dörpfeld's criticisms would be possible only after the publication of his anxiously awaited volume on the temples of the Acropolis. Even though I may venture to differ in the interpretation or elaboration of various details, it is always with full realization that he has been responsible for the fundamental discoveries in practically every instance, and that his methods of interpretation form the pattern which I have striven to follow.

Turning first to the architectural evidence for the Older Parthenon, the main point at issue is the question of its subdivision into two projects, "Parthenon I and II," the present structure thus becoming "Parthenon III." I must confess that, since we agree on the exclusion of retaining wall "3" from the Pre-Persian period, and on the fact that the Kará limestone step formed part of the marble Older Parthenon, I still see no architectural evidence in favor of subdivision of the Pre-Persian project. Professor Dörpfeld regards the two uppermost courses of the great basement as "unbestreitbare Stufe" of a poros Older Parthenon, and infers that they would have required a stylobate of harder material, and that the Kará limestone bottom step of the marble Older Parthenon was originally this missing stylobate. But the lower "poros step" (1, Abb. 1) is nothing but an ordinary wall course, and the upper (2) is better interpreted as a coping, receding instead of projecting; the recession is hardly the tread of a step, being disproportionately narrow (0.452 m. finished as compared with a rise of 0.581 m.). The Kará step blocks, furthermore, exhibit no signs of reemployment such as would be apparent if they had been bodily picked up and moved inward to fit the revision from "Parthenon I" to "Parthenon II." It would be necessary to assume that the top surface was cut down, not only because its rear portion now forms a sunken bed to receive another step (*A.J.A.* 1912, p. 539, Fig. 3), but also because the front portion has a smooth border separating it from the sunken bed at the rear (showing that the sunken bed was not an alteration), and because the finished height of the Kará step (0.526 m.) is disproportionately low as compared with 0.581 m. and 0.545 m. in the assumed poros "steps" below.¹ Also the end joints of the Kará steps must have been recut, since the horizontal anathyrosis bands are of the same width as the vertical bands and so were intended for the present height of 0.526 m. Likewise the fronts must have been recut, since the upper edge of the front face always shows the narrow decorative smooth border symmetrical with that on the ends and lower edge of the pebbled panel, obviously intended for the present height of 0.526 m. In other words, the Kará step not only fails to show signs of anterior use, but, if so used, its original surfaces must have been completely chiseled away, depriving us of all material evidence and leaving only a hypothesis.

¹ A stylobate is normally at least equal to, and usually higher than, the steps below. In the marble Older Parthenon, for instance, the stylobate was 0.554 m. (finished) as compared with 0.521 m. and 0.526 m. for the steps below.

And I do not believe that this hypothesis can survive in the face of the ceramic evidence to the contrary.

It must be admitted that the ceramic evidence, which Professor Dörpfeld regards as inconclusive, has sometimes been regarded both as dated by the architecture and as dating the architecture, and so at first glance might appear to result in a vicious circle. Strictly, however, it is the date of the Persian débris surrounding the Parthenon, and not at all the date of the Parthenon foundation itself, that yields the fixed datum point in the development of the red-figured style. With this point fixed, and checked by reference to the material buried at Marathon in 490 and at Miletus in 494 B.C., by the state of development in the "Leagros period" of 510-500 B.C. (the young manhood of the well-known Leagros born in 526-524 B.C.), and by the interlocking and overlapping styles and careers of known ceramic painters and potters, one reaches about 530 B.C. for the beginning of the style. Even if, as Dörpfeld now suggests, one were to thrust the beginning back to 550 B.C., we should hardly be able to antedate the vases of the decades 510-500 (Leagros) and 500-490 B.C., on which my date of the foundation depends.

As for the astronomical evidence, I had stated that this is valid only if we accept the architectural and stratigraphical evidence for a date between 490 and 480 B.C.; it cannot be considered independently. In view of the compelling necessity for a date very shortly after 490, however, the calculation yielding August 31, 488 B.C., is too striking to be a mere coincidence.¹ The fact that 488 B.C. was not a year of the Great Panathenaia cannot be regarded as an objection.

WILLIAM BELL DINSMOOR.

COLUMBIA UNIVERSITY
New York

¹ I feel that Professor Dörpfeld has misinterpreted my calculation, which was based, not on an invisible astronomical sunrise, but on the actual sunrise visible from the temple. It would be desirable to test this at sunrise on the morning of August 23, 1936.

EARLY GREEK INSCRIPTIONS ON METAL: SOME NOTES

THE process of inscribing letters on metal must of necessity differ fundamentally from the process of cutting letters on stone. Yet what precisely the differences are between the two processes has not hitherto been clearly made out. The rarity of inscribed objects of metal in comparison with the enormous wealth of stone epigraphical documents has made it difficult to draw any general conclusions as to metallic epigraphy.

A further difficulty which must of necessity impede the study is the fact that the bulk of surviving metallic inscriptions are in bronze, and the surface of ancient bronze is rarely so well preserved that it will exhibit the refinements of detail which are essential for a technical study. The ideal medium for the preservation of detail sufficient to indicate the processes of inscribing is, naturally enough, gold. Silver serves nearly as well. But here the supply of material is sadly lacking.

In the hope that at least a few conclusions of value may be drawn from existing material I have collected here a few notes upon a group of inscribed metal objects of early Greek date. Of these the earliest belongs probably to the seventh century B.C. and the latest to the middle of the fifth century. One other inscribed object, incidentally discussed, is later still.

As a preliminary to this enquiry it is essential to consider the problems which faced the craftsman who was to inscribe letters on metal. In contrast with the task of the carver of stone inscriptions, that of the metallic epigraphist was more risky. There were more opportunities for slipping, more chances of mishap. For the surfaces to be inscribed were less easily penetrated, and the substance dealt with was tensile instead of frangible. Obviously, then, the problem faced by the craftsman was how to evade his difficulties; and his difficulties were mainly three:

(a) Shall the straight bars of letters be chased at an angle by a tool which is either continuously pressed or repeatedly beaten on the surface of the metal? (i.e., by tools like the scorper or burin¹) or shall they be stamped by a tool that strikes vertically down on to the surface of the metal?

(b) How are arcs or short curved lines to be rendered with safety?

(c) How shall the small circles necessary for O, for *Theta*, for *Phi* and for *Koppa* be made?

These, I think, would be the main problems which would confront any craftsman commissioned to make on metal an inscription in Greek or in English or Latin capital letters at any age. By late Greek times, in Roman times and today a long heritage of experience provided easy answers. But to the early Greek craftsman faced with the task of inscribing a metal plate or vessel or statuette whose surfaces might be sharply curved or glassily flat, they would be problems of no mean order.

From the examples which I have examined it is clear that the Greek evaded his difficulties sometimes by means of ingenious contrivance: he dodged the issue in the time-worn Greek manner, just as a hundred Greek politicians dodged difficulties,

¹ See my *Technique of Early Greek Sculpture*, p. 232.

just as Delphi explained away its more dubious prophecies. Sometimes the Greek faced his problems fairly and squarely and solved them bravely.

But let us take the problems in order, illustrating them by an example which shows how they were solved. The instance chosen covers all of the three problems:

(a) One of the earliest inscriptions on bronze happens also to be one of the best preserved; it is on the strange bronze statuette dedicated by Mantiklos (Fig. 1) in the Museum of Fine Arts at Boston.¹ Here the inscriber wanted to make a series of letters of which the majority were rectilinear, a few requiring curves and circles. His rectilinear lines he has made by employing a blunt flat chisel and striking it from above with a mallet, thus using it virtually as a punch. This is shown by the fact that the edge of the chisel bites most into the surface of the bronze at the summit of any given convex surface, and the line so made fades away at each edge. This is always characteristic of punched lines on curved surfaces and sufficient proof that they are not chased. A chased line would have a clearly-defined beginning and end even on a convex surface (clearly defined straight lines chased by a burin are obvious in Fig. 6) and the ends of chased lines, as often as not, end with a small nick where the graver had turned the metal upon concluding its furrow.

(b) For short curved lines and arcs, which the inscriber has needed in the case of the *Alpha*, which he represents thus Α, he has used a tool which had a curved section, consequently a gouge. It, like the chisel, had a blunt edge and was used for striking in the manner of a punch.

(c) For his circles the inscriber has employed a totally different tool—the ring-punch. Afraid of cutting at an angle with a burin or chisel and delineating his circle thus, he logically continues to punch his inscription. Indeed there is no reason to think that he was even acquainted with chasing and its methods. The ring-punch which he used can be reconstructed as an iron bar of circular section with the flat face of one end fashioned into a circle about 2.5 mm. in diameter. The face of the punch would have resembled exactly a printers' type for a circular O, the center of the O being hollowed out and the edges of the O given a biting edge. As such the tool would be strong and simple and extremely easy to make. The fact that it was used on this inscription is proved by the exact coincidence of diameter of each of the circles used. It is of minor interest to see that the *Phi* is made as follows: the circle was struck first, and over the circle the long stroke was subsequently made.

The condition of the inscription as a whole does not make it possible to say more than the above. Possibly two sizes of plain flat chisel were used, and pos-



FIG. 1.—DEDICATION OF
MANTIKLOS

¹ *Mon. Piot*, II, p. 137; W. Lamb, *Greek and Roman Bronzes*, p. 74.

sibly two sizes of gouge for the curved lines. But only one ring-punch was employed.

In all inscriptions one must allow for the personal idiosyncrasies of the craftsman and for local usages and habits. But in the early days of a craft the tendency is usually towards standardization, and erratic methods do not as a rule occur until the craft is more fully developed. In this one early bronze the craftsman has been consistent throughout. Every letter was punched: and punching an inscription is by far the safer way. As we know, Greeks both in art and in epigraphy played for safety. It was an expensive business to make mistakes, particularly if you were handling another man's property or inscribing the work of an irascible artist.

The Mantiklos figure is of uncertain date. It is said to come from Boeotia where stylistic datings are notoriously unstable. The Geometric affinities of the bronze

point to an unusually early date, but I see no very cogent reason for placing it earlier than the first half of the seventh century, and it may be slightly later.

In any case the tool-box of the epigraphist is open to us. We can reconstruct all his principal tools and the way in which they were used. He was a craftsman who knew nothing of oriental methods of burin-chasing which are clear enough on Phoenician bowls and other



FIG. 2.—FOUR COINS OF TANAGRA AND THREE OF THEBES

oriental fabrics. He stuck to his last and preferred to hammer out his letters like any cobbler at a shoe.

Confirmation of the early use of the ring-punch is found in another Boeotian bronze of later date—the Kabeiriot bull in the Boston Museum, which is dated to the middle of the fifth century. Here, in a very clear and well-preserved inscription, exactly the same flat chisels used as punches have been used for the letters, curved limbs have gone out of fashion and with them the gouge-punch, and the circles have been done with a ring-punch measuring exactly 2.75 mm.

Further confirmation of the ring punch and its usage is found in another field of metallic work—the making of coin dies. The most striking instance I have yet found is that of a particular series of coins of Tanagra¹ (Fig. 2), which are clearly distinguished from all others of this city by the fact that the punch that struck the reverse is in fact nothing more nor less than itself a large ring-punch measuring 12.5 mm. in

¹ *B. M. Cat., Central Greece*, Pl. IX, Nos. 11–16. The coins are attributed to the period immediately following the Persian wars. The dimensions of the punch in the case of Nos. 11–14 are exactly the same in each case, though in no two cases are the details of the design identical. This looks as if all the punches had been manufactured from the same bar of iron. In the case of No. 13 the letter has been chiseled after striking, perhaps in recent times. In the illustration above (Fig. 2), Nos. 11–14 are shown on the left. The three coins on the right are Theban.

diameter. The sharply defined ring of the punch has struck on the coins in each case a very clear circle. The unevenness of the metal surface and the fact that the punch could not without mechanical adjustment be made to strike with its surface exactly parallel to the metal surface has resulted in the punch-edge penetrating in one place more than in another. This, as will be seen later, is a characteristic of the ring-punch. The punch itself had to contain within its circle a design of the spokes of a wheel and lettering; this was worked on the inset surface of the ring-punch in the usual manner of coin-dies. But in effect the punch is merely an elaborate version of the metal-worker's ring-punch, as seen on the Mantiklos or on the Kabeiriot bronze, adapted by a skilful die-cutter to meet the requirements of coin-dies. I know of no other instance on coins so clear as this.¹ On the three coins of Thebes shown in Fig. 2 the die-cutter has used a ring punch for making the central *Theta* on the die.



FIG. 3.—INSCRIPTION ON THE KYPSELID BOWL

A consideration of the ring-punch leads us at once to a study of the gold bowl in the Fine Arts Museum at Boston² which bears an inscription attributed to the Kypselidai of Corinth. Here is a lovely piece of metalwork on which has been preserved, as only gold can preserve it, an inscription of 25 letters. As Dr. Caskey originally pointed out in his first publication of the bowl, three tools were employed for the making of the inscription: what he calls a "tubular puncheon" (identical with my "ring-punch") and "small blunt chisels, one twice as long as the other for the straight-strokes." A glance at the inscription itself (Figs. 3, 4) shows at once that almost exactly the same tool-box was used by the maker of this inscription as that used by the inscriber of the Mantiklos bronze. Here is one *Koppa* and a *Theta*, both exquisitely rendered by a ring-punch measuring about 2.5 mm. in diameter. The circle of the *Koppa* shows a slight pressure on one side which indicates that the punch was not held quite truly when struck. The same was seen in the Tanagran coins.

The two chisels in use (and there were only two) measure 5 mm. and 2.5 mm. respectively. The smaller is used for the short strokes of all the other letters that are

¹ The clearest instance is perhaps the small denomination, No. 16.

² *Museum of Fine Arts Bulletin*, No. 122, 1922, and *id.*, No. 143, 1926.

rectilinear and for the internal cross-strokes of the one *Theta*. The *Alphas* are definitely rectilinear also, unlike those of the Mantiklos bronze.

The firm fact that the inscriber of the bowl employed exactly the same tools as were used for the Mantiklos bronze (excepting only the gouge) and for the later Kabeiriot bronze, and the further fact that the ring-punch was known and employed on metal from the period 700–450 B.C. seems to me sufficiently to authenticate this bowl as genuine even if stylistic and other arguments which have been adduced¹ are not sufficient. Technical evidence alone precludes a forger. It is in the highest degree improbable that any forger could so skilfully have hit on the tool-box of the region and period. For it seems probable that the ring-punch was not a universal tool of metal-inscribers. Its popularity, if we can judge from the not very numerous examples available, was mainly in Central Greece. In other areas other tools are used during this period. The *Phi*, *Theta* and *Omicron* of the early fifth century



FIG. 4.—INSCRIPTION ON THE KYPSOLID BOWL

bronze statuette in the Metropolitan Museum at New York in the dedicatory inscription by Phauleas,² are done by chasing. Possibly, had we evidence enough of early date, we might find some variation of tools in early times, though I doubt if actual chasing of inscriptions much antedates 500 B.C.

The Kypselid cup can thus take its normal place

as a historical document and the authenticity of the inscription is surely guarantee that the cup itself is not a forgery. I have heard of genuine vessels with forged inscriptions, but I have yet to see a genuine inscription on a forged cup!³

A further point deserves consideration. We have seen how the metallic epigraphist evaded the difficulty of making a circle freehand and invented the convenient prototype of the typographer's letter O. But if the craftsman lived in a more primitive region and had neither the means nor the knowledge to make his circle in this safe and foolproof fashion he was driven to another equally safe alternative. In the coins of Macedonia and Epithrace about the year 500 and shortly after there appears on many issues of coinage a sign or symbol consisting of a small circle. Occasionally⁴

¹ Particularly the comparison with the bronze bowl executed at Samos (*Bulletin*, No. 143).

² Richter, *Catalogue*, No. 58.

³ The scrupulous can, of course, adduce the instances of old English silver which is forged but yet bears genuine hall-marks. This type of forgery is done by the insertion of ancient hall-marks on patches taken from an old vessels.

⁴ This alone seems to contradict Mr. Seltman's theory. Craftsmen here when efficient could make the plain circle. Sometimes they made it by drilling over a dotted circle. For this intermediate stage see Seltman: *Athens, its history and coinage*, p. 55.

it appears as a plain circle made with a drill in intaglio on the coin-die and appearing on the coin therefore in relief. But for the most part it is rendered as a circle of small clearly defined dots. The principal coinages where it appears are those of Chalcidice, the Pangaeian district, Akanthus, Abdera, Aegae, Lete, Aeneia, the Derrones, Bisaltae, Ichnaeans and Tyntenoi. In one issue of unknown attribution¹ its symbolic character is evident from the fact that the small circle is held in the hand of a running archaic figure who wears a winged belt: here in this lovely coin it looks like a small globe of fire and is again rendered as a dotted circle.

Svoronos² considered this symbol to be the sun-symbol of the Paeonian sun-god and he may well be right. Imhoof-Blumer noted it as a sign that could not definitely be distinguished either as a letter or as a symbol. Mr. Seltman³ goes farther and is quite certain that it is "a symbol or letter which occurs in no other district of the ancient world." So convinced is he that the dotted circle is, by virtue of its dotted nature, symbolic, that he is able from the discovery of a similar dotted circle, masquerading also as the *Theta* in the AΘE inscription on an early and apparently barbaric issue of coins that bear the devices of Athens—the Owl and Athena head—to infer that this barbaric issue was struck by Peisistratus while in exile in the Pangaeian region. The dotted *Theta* he concludes is deliberately so made to indicate the Paeonian mint of these coins.

Now if you are not fortunate enough to know of the ring-punch, you will find the making of a very small circle on a flat coin-die an exceedingly difficult task. The cutters of the dies both of the various Thraco-Macedonian issues and also of the "barbaric" Athenian coin-dies were in no sense experienced or sophisticated metal-workers. On the contrary some of the Thraco-Macedonians were bad artists as well, and it is fairly safe to say that all the dies of Mr. Seltman's "Paeonian mint" are artistically very poor work indeed. Is it remarkable then that they boggled at the vexing problem of making small circles? The Alpha and the E of the AΘE they cut easily enough with an ordinary revolving drill. They first made a vertical pressure of the drill at each end of the desired straight line and then ran the drill from one hole to the other. A brief examination of the coins will show accurately that this was the case. It is equally clearly to be seen on almost any coin of Athens of the sixth or early fifth century. But the die-makers of Athens were highly competent and at the same period could quickly cut a small circle with the drill. I can find no evidence at all that Athenian die-cutters ever used the ring-punch. But the makers of these "barbaric" coin-dies were nothing like so competent and dared not use the drill for their circles. Consequently they were driven to the other method of dotting the circle,⁴ since they knew nothing of ring-punches.

That, I firmly believe, is all that is necessary to explain these mysterious circles. But if further proof is needed the following facts should suffice. The same problem with its concomitant risks faced also the carver of inscriptions on stone and marble.

¹ *B. M. Cat. Macedon*, p. 136, No. 2.

² J. N. Svoronos: *L'Hellénisme Primitif de la Macédoine* p. 18.

³ *Athens* p. 55.

⁴ Sometimes a craftsman who had an uneven surface to inscribe made the entire inscription of dots, cf. the bronze Kabeiriot bulls, *I.G. VII*, Add. 3583, 3591, 3592. This evasion belongs to all regions and periods.

Faced with the problem of cutting a circle he sometimes wavered. The best and most sophisticated cutters of the sixth century never turned a hair. They faced the problem and cut their circles freehand. Witness the cutter of the Hekatompedon inscription who is also the cutter of the newly restored Simonides/Aeschylus(?) epigrams on Marathon.¹ Here the Os are triumphantly successful. But an earlier cutter, the epigraphist of the mid-sixth century stele of Megakles in the Metropolitan Museum at New York, was afraid of his problem. Faced with the task of cutting a *Theta*, a *Phi* and an *O*, he collapsed and made them by means of an immensely laborious method of using his pointed punch vertically to the stone (Fig. 5). Each of these letters is the fruit of much hard but safe work. Each circle involved at least a hun-



FIG. 5.—INSCRIPTION ON BASIS OF THE MEGAKLES STELE, NEW YORK

dred strokes of the punch, as contrasted with the swift cutting of the rectilinear letters. A close inspection will reveal almost the exact total of hits he made. Yet no one would suggest that he was attempting to indicate the sacred sun-symbol of Paeonia! The simpler explanation is the wiser one. He, and his contemporaries, the die-cutters of the "barbaric" Athenian coins, were both solving the same problem in the same way.

Again a surprising additional proof of this method comes from a metal object of much later date, a fine *mina* weight now in the Warren collection at Bowdoin (Fig. 6) College, Maine.² Here the craftsman was set the task of cutting into the moulded surface of the weight the following inscription:

ΔΑΜΟΞΙΑ ΑΓΟΡΑΝΟΜΕΟΝΤΟΣ ΜΕΝΕΞΕΝΟΥ

He was a sophisticated metal-worker belonging to the time when metal-chasers

¹ *Hesperia*, II, pp. 480 ff.

² Here published by the kindness of Professor Andrews. The place of origin of this interesting weight is not known.

knew all about the burin and the scorper. His sole tool was a thin clean-cutting scorper with a blade of triangular section. Its point would impress on the metal a small intaglio triangle. Each end of a straight line would show the same triangle where the line was begun and ended, due to the fact that he imbedded his scorper in the metal at the beginning and end of each stroke.



FIG. 6.—BOWDOIN MINA

But he too was a nervous man. Faced with the problem of rendering five *Omicrons* and the upper curve of a *Rho*, he too boggled at his task and did all these curves and circles by digging his scorper into the metal and making circles of dots like his Paeonian and Athenian predecessors in the case of the coins and the stele. Nor could he resort to the ring-punch, for that had long gone out of fashion and craftsmen probably fancied them-

selves too much to resort to such crude devices. Still, he was afraid to spoil the fine city-mina which, no doubt the Agoranomos had given him to inscribe. Hence his dotted evasion.

Paeonian the "barbaric" issue of sixth century Athenian coins may well be, but they are not proved Paeonian by their dotted circles, any more than is the Bowdoin mina of Paeonian origin.

Much work is to be done yet on metallic epigraphy, but the above notes may help to lay a few foundation stones of what must prove a useful enquiry.

STANLEY CASSON

ARCHITECTURAL DETAIL IN ANTIQUE SEPULCHRAL ART

THE conception of the tomb as the house of the dead found expression in classical times in the sarcophagus and the grave stele. The earliest examples are the terracotta sarcophagi of the sixth century which have been discovered at Clazomenae. The custom of setting these sarcophagi upright during the *prothesis*¹ favored the conception of them as *aediculae*. The lateral edges were broadened into antae with base and abacus (Fig. 1)² which carry an entablature with frieze and mouldings. The figures of the frieze were sometimes painted light against a dark ground, as in the example at Berlin. This technique copied that of the Ionic frieze which in the case of the Siphnian Treasury had a blue background. The custom at Clazomenae of showing the deceased standing in his terracotta house or shrine was infinitely less pleasing than that of Athens where his sculptured figure was enshrined within an *aedicula* at the grave. In both cases the architectural details may be those of a temple and may have expressed the belief that the dead acquired divine status. Such belief certainly prescribed the form of the sarcophagus of the Mourning Women.³ The hope expressed by the temple-tomb inspired Cicero to wish for his daughter Tullia not a *sepulchrum* but a *fanum*. He desired for her an apotheosis.⁴

The Ionic sarcophagus seems not to have had a Doric counterpart, but the influence of the Doric sanctuary or *heroön* upon sepulchral art is seen in the grave "gables" of Boeotian Thebes and Tanagra (Fig. 2).⁵ Several of these have an architrave with the name of the deceased, a frieze of metopes and triglyphs, and a pediment with acroteria. These gables expressed the same idea as the sarcophagus of temple form. Although carved in limestone, the best of these monuments shows a desire for exactness in copy. The frieze is felt as architecture. A conspicuous feature is the finely spaced rosette in the metopes. Now the earliest known building which had a Doric frieze with rosettes is the *tholos* at Epidaurus.⁶ Rosettes alternating with bucrania carved in relief decorated the *tholos* of Samothrace which was built by



FIG. 1.—A SARCOPHAGUS OF CLAZOMENAE (BERLIN)

¹ Kjellberg, *Jb. Arch. I.*, 1926, p. 53.

² *Ant. Denkm.* II, pl. 58 (Berlin).

³ The Athenian sculptor of this sarcophagus may, like his contemporary Plato, allude to Orphic doctrine. The vine spray on the sarcophagus of Alexander has been regarded as Dionysiac. Cf. Hamdy Bey-Reinach, *Nécropole royale à Sidon*, p. 274.

⁴ *Ad Att.* 578; see Tyrrell-Purser, *Correspondence of Cicero*, V, p. 54.

⁵ Reproduced from Karouzou, *Tò Μουσείο τῆς Θήβας*, 1934, fig. 29. Cf. *Arch. Deltion*, 1917, p. 316, figs. 189-191.

⁶ *Ant. Denkm.* II, pl. IV; p. 2.

Arsinoë.¹ It is a singular fact that the sepulchral Doric frieze with rosettes, which in Greece seems to have been limited to Boeotia, appears in Italy. An example is the sarcophagus of Scipio² (Fig. 3), which by combining the Doric frieze with Ionic dentils repeats the contamination of the orders in Hellenistic architecture. It has a relatively large rosette of varying pattern in the metopes. In other examples the Doric frieze loses its distinctive character and, instead of crowning the wall, is confused with the Ionic colonnade, occupying the entire side of the sarcophagus. In illustration of this confusion may be cited the sarcophagus of Seianti Thanunia³ (Fig. 4), which has three metopes with rosettes. The inner triglyphs have become quadriglyphs with five guttae above and below. At the corners appears an anta with Ionic capital which may have been borrowed from the sarcophagus of temple form.⁴



FIG. 2.—BOEOTIAN SEPULCHRAL "GABLE" (THEBES)

Another Etruscan sarcophagus, of Larthia Seianti (Fig. 5), which was produced at Chiusi about 200 B.C.⁵ goes a step further by repeating the triglyph-anta throughout the frieze. Each of the metopes has a rosette or patera, the rosette being more complicated than those in the Doric friezes of the Etruscan cinerary urns which are regularly quatrefoil.⁶

¹ Conze, Hauser u. Niemann, *Samothrake* I, pl. LXI. A stele from Rheneia has four metopes in which the rosette alternates with the bucranium. It is illustrated by Möbius, *Die Ornamente der griech. Grabstelen*, pl. 39a.

² Amelung, *Sculp. Vat. Mus.* II, p. 5. Cf. Altmann, *Architektur u. Ornamentik der antiken Sarkophage*, pp. 43-45.

³ *Ant. Denkm.* I, pl. XX; p. 9; Ducati, *Stor. Arte Etrus.* I, pp. 547, 560; R. P. Hinks, *Greek and Roman Portrait Sculpture*, pl. 19.

⁴ E.g. *Brit. Mus. Cat. Sculp.* I, 2, pl. V; Brunn-Körte, *Ril. Urne Etr.* III, pl. 152, no. 4. The volute may be derived from the sarcophagus of couch type, e.g. *Mon. Ant.* VIII, 1898, pl. 13.

⁵ *Ant. Denkm.* I, p. 10; cf. Amelung, *Führer d. d. Ant. in Flor.*, p. 189.

⁶ Brunn-Körte, *op. cit.*, III, 66, 84, 104, 113, 139, 146, 152.



FIG. 3.—THE SARCOPHAGUS OF SCIPIO



FIG. 4.—ETRUSCAN SARCOPHAGUS OF SEIANTI THANUNIA

The limitation in Greece of the Doric frieze with rosettes to the sepulchral art of Boeotia and its great popularity in the same kind of art at the same time in Etruria raises a question whether there was a direct connection between the two. Altmann was reminded by the color of the Etruscan sarcophagi in question of the figurines of Tanagra,¹ one of the two places where the Doric frieze with rosettes occurs as sepulchral decoration. The Etruscans may have derived this frieze from the Boeotians as a result of early and intimate ties with them. There was a tradition that the Cabiri, who had a sanctuary at Thebes, carried to Etruria in a *cista* a part of the body of Dionysus which they taught the Etruscans to worship.² The tradition does not state



FIG. 5.—THE ETRUSCAN SARCOPHAGUS OF LARTHIA SEIANTI

that the Cabiri carried their burden from Thebes but the Cabirium there was the only one of importance on the Greek mainland and probably shared its traditions with the Cabiric sanctuary of Samothrace. There may be noted in this connection a scene upon an archaic Boeotian amphora of priestesses bearing a *cista* which is profusely decorated with rosettes set in circles (Fig. 6).³ Among these are two rows of quatrefoils. It is the quatrefoil more naturally rendered that recurs repeatedly on the cinerary urns of Etruria. If this *cista* is sepulchral, then the profusion of rosettes would explain their appearance later upon the sepulchral "gables" of Thebes and Tanagra, the rosette having a traditional sepulchral character in Boeotia. The popularity of the sepulchral rosette in Etruria is thrown into high relief by its ab-

¹ *Op. cit.*, p. 35.

² Clem. Alex., *Protrep.* II, 19.

³ *Bull. Boston Mus.* VII, no. 38, p. 12.

sence from Roman Gaul. The very extensive collection of reliefs from that country made by Esperandieu shows not a single example of the motif.¹ It seems to have flourished in Etruria and to have expired there with the Etruscans.

The Etruscan Doric sarcophagus with rosettes in the metopes is of further interest as the probable model for the sarcophagus in scenes of the entombment of Christ on Gothic ivory diptychs of the thirteenth and fourteenth centuries (Fig. 7).² The re-



FIG. 6.—DETAIL OF EARLY BOEOTIAN AMPHORA

semblance of the two lies not only in their proportions and simplicity but in the scheme and character of the decoration. The sarcophagus in the diptych, like that of Seianti Thanunia, has a frieze of three metopes with a quatrefoil in each. The corner triglyphs have disappeared as well as the central glyph of the other two but the space for it is left blank. In another diptych the single rosette on the end of the sarcophagus is flanked by two glyphs which have been sharply pointed at the top to harmo-

¹ *Recueil des Bas Reliefs de la Gaule Romaine*, vols. I-IV, VI-X. There are a few examples of the rosette and the bucranium in alternate metopes but these seem all to have come from buildings and not from sarcophagi; *ibid.*, I, p. 319, 454-456; IV, 426; X, 148.

² Koechlin, *Ivoires Gothiques*, pl. XIII, no. 34.

nize with the pointed arches above.¹ The quatrefoil in a circle and flanked by glyphs is a detail of Etruscan cinerary urns.² It is quite possible that the sculptor of the diptych had seen an Etruscan sarcophagus the side of which was divided into three metopes decorated with quatrefoils. Such sarcophagi may have been discovered in the Etruscan cemeteries during the Gothic period as were Greek vases. Ristoro d'Arezzo (1282) recorded the admiration which sculptors and designers of the thirteenth century expressed for the Greek vases found in their time.³ They regarded the vases as sacred relics, calling their makers divine. If an Etruscan sarcophagus

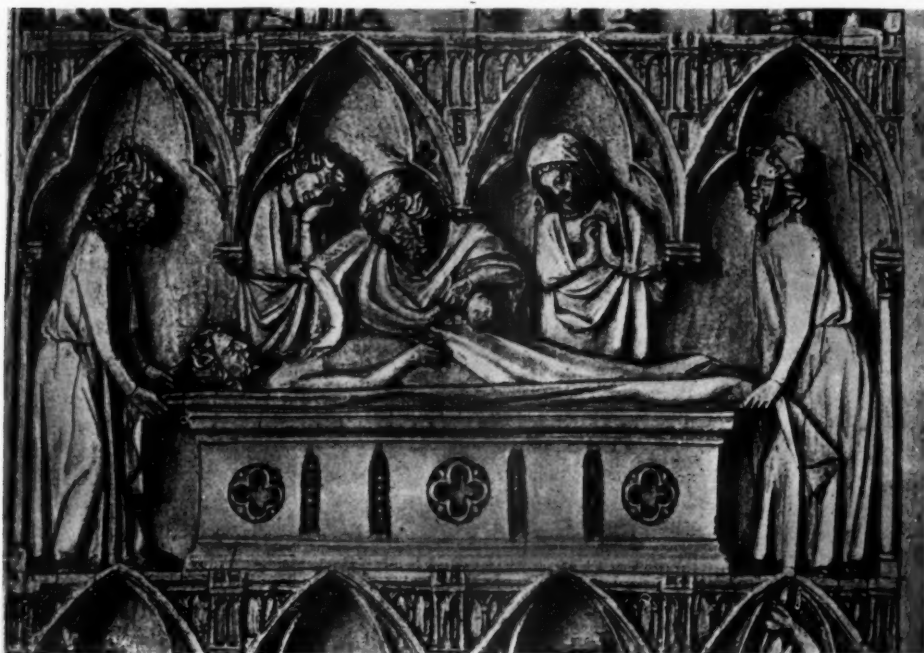


FIG. 7.—DETAIL OF GOTHIC IVORY DIPTYCH

ever made such appeal, then its use as a model for the tomb of Christ would be easily understood.⁴

The frequency of the rosette on sepulchral monuments raises a question as to its significance. Is it merely conventional decoration? The sepulchral rosette is as old as Mycenae and Orchomenos where it adorned the walls of *tholos* tombs. It was painted upon the sarcophagus of Hagia Triada and set in gold upon the silver bull's head which was buried with a prince of Mycenae. Streng believes that the earliest "ro-

¹ *Ibid.*, pl. XV, no. 38.

² Brunn-Körte, II, 48; *Brit. Mus. Cat. Sculp.* I, 2, p. 231, fig. 91.

³ F. R. Shapley, *Art Bull.* 1919, p. 79.

⁴ The absence of the Doric frieze with rosettes from the sepulchral reliefs of Gaul suggests that later French art derived the pattern from Italy. The sarcophagus of the Virgin in a tympanum of the cathedral at Sens has four squarish rosettes in squares separated by three vertical lines which may represent original triglyphs. The tympanum is illustrated by Aubert, *La Bourgogne*, I, pl. 12.

sette" was astronomical, and that the later association of the cult of Aphrodite with death led to the choice of the chrysanthemum as the first floral rosette.¹ He finds that the rosette has no connection whatever with the rose. There is, however, a possibility that when the cult of Aphrodite and Adonis came to Greece it substituted for the chrysanthemum the rose which was very common there. Ancient tradition apparently affirmed that the mystic rose which sprang from the blood of the dying Adonis had been carried to Cyprus by Astarte.² The rose in springing from the blood of a dying god suggests the vine which arose from the blood of the divine Mithraic bull, and the pomegranate which sprang from the blood of Dionysus.³ Since the rose was the flower of Adonis, the Phoenician Thammuz, it may be that its introduction into Theban sepulchral art is to be attributed to the Phoenician Cadmus. That a Mycenaean tradition lies behind the Boeotian sepulchral rosette is indicated by decoration on the garment of a "Caryatid" on a Boeotian amphora (Fig. 6). This decoration consists of a row of rosettes in discs beside another of octopods.⁴ The latter recall at once the gold discs of Mycenae which were stamped with the design of an octopus, and which served to decorate the garments of the royal dead in the shaft graves.

There is another Mycenaean site where the rosette may also have retained sepulchral associations from an early period. On the Athenian acropolis the Caryatid Porch of the Erechtheum was to receive a number of rosettes according to official specifications.⁵ They were never finished. No satisfactory explanation of this unusual feature has been offered, nor of the restriction of the rosette to the architrave of the Porch. A marked departure from the norm in Greek architecture is frequently to be referred to anterior structure on the site. The rosettes of the Porch may have been inherited from a pre-Periclean Erechtheum. This is the more likely in view of the intimate connection of the Porch with the tomb of Cecrops. In the official inscriptions the Porch is named in terms of the Cecropium: ἡ πρόστασις ἡ πρὸς τῷ Κεκροπίῳ. As previously noted, the earliest example of the Doric frieze with rosettes in actual architecture is that of the *tholos* which stood within the sacred enclosure of Asclepius at Epidaurus. It may have been the *abaton* where the god performed many of his cures. Asclepius was not only a god of healing but also raised the dead to life.⁶ The rosettes may have alluded to the latter function of the god and have come with his cult from Thessaly where, as in the Athenian Ceramicus, grave stelae with rosettes were common.⁷

The rosette which clings to sepulchral monuments from the Helladic to the Hellenistic age was not mere architectural decoration but rather a symbol of new life resurrected from the earth. The rose sprang from the blood of Adonis who died and was resurrected. So too his worshiper would rise again. The celebration of the

¹ *Das Rosettenmotiv in der Kunst- und Kulturgeschichte*, 1918, p. 39. Cf. Malten, *Jb. Arch.* I., 1928, p. 127.

² Vellay, *Le Culte et les fêtes d'Adonis-Thammouz*, pp. 58, 132. Vellay refers to the coffin of Adonis as decorated with roses. Paus., VI, 24, 7; Bion, I, 66.

³ Clem. Alex., *Protrep.* II, 19.

⁴ The third row of geometric pattern is paralleled exactly by designs on Minoan seals. Cf. Matz, *Frühkret. Siegel*, pl. X, nos. 5, 6.

⁵ Caskey, *The Erechtheum*, p. 314.

⁶ Pherecydes, schol. ad Eurip. *Alc.* I. Apollodorus (III, 10, 3) gives a list of those revived by the god.

⁷ Möbius, *op. cit.*, pls. 51 ff.

Adoneia for a deceased youth, as described by Ammianus,¹ illustrates the personal application of the faith. The rose of the Adoneia very naturally became a sepulchral symbol for those who believed that they would share in the resurrection of their god. That the rosette in time served as a conventional ornament for the grave stele is possible but the tenacity of its association with the monuments of the dead suggests a continued appreciation of it as a symbol of Adonis.

G. W. ELDERKIN

PRINCETON UNIVERSITY

¹ Cf. Vellay, *op. cit.*, p. 134.

PRELIMINARY EXPEDITION TO CILICIA, 1934, AND EXCAVATIONS AT GÖZLÜ KULE, TARSUS, 1935

IN THE spring of 1934 Bryn Mawr College sent an expedition to Cilicia in southern Asia Minor whose task was to be the location and preliminary study of archaeological sites lying in the Cilician plain east of the harbor town of Mersin.¹ The Turkish government readily accorded us the permission necessary for our undertaking, which included not only the right to travel about freely but that of making soundings together with the Director of the Adana Museum with a view to the eventual choice of a site for more intensive investigation. It is with the greatest pleasure that I take this opportunity to express my sincere appreciation of the ready help accorded us by the Turkish authorities and of the intelligent understanding with which Dr. Hamit Subeyr Koşay, Director-general of the Museums of Turkey, followed and supported our work from the very beginning. There were no misunderstandings and there were no delays. Thirty-six hours after we had left Ankara we were able to begin our reconnaissance, accompanied by Bay Halil Kamil, the then director of the Adana Museum. He remained our friendly companion and collaborator during all the work of 1934.

The expedition stayed in Cilicia from April 19 until July 25, visited forty-one sites and undertook soundings of varying length at four: the mounds of Zeytin and Kabarsa lying between Adana and Tarsus, Domuz Tepe on the east bank of the river Jeihan—the Pyramos of classic times—and Gözlü Kule on the southeast edge of the modern town of Tarsus. At Gözlü Kule we made a sounding lasting from July 1 to July 20. This marked the final activity of the preliminary expedition of 1934.² In view of the careful study made by Dr. Einar Gjerstad³ of the sites visited and potsherds gathered on a similar trip of reconnaissance in Cilicia, the results of which were published while our expedition was in the field, it seems unnecessary to publish our findings for the present. When they have been studied in the light of the results obtained in the more complete excavation of Gözlü Kule, which was begun in 1935, they will form part of our final publication.

EXCAVATIONS AT GÖZLÜ KULE, TARSUS, 1935⁴

Of all the mounds which rise out of the flat Cilician plain, Gözlü Kule (Fig. 1) is by far the most impressive. It is twice as long as any other, and it alone had structural remains visible on the surface before excavation took place. In its present state (Fig. 2) it measures some twenty-two meters in height at the steepest point

¹ The staff consisted of Hetty Goldman, Field Director, Dr. Emil Forrer, adviser on sites, Ann M. Hoskin and Robert W. Ehrich, assistants.

² Dr. and Mrs. Forrer, who had been making soundings in Syria for Bryn Mawr College, joined us at Tarsus.

³ "Cilician Studies," *R. Arch.* 6, Sér. 3, 1934, pp. 155-203.

⁴ For the support of the campaign of 1935 Bryn Mawr College was joined by the Archaeological Institute of America, which had already in 1934 expressed its interest in a joint undertaking, and by Harvard University with a contribution from the Milton Fund.

Miss Dorothy H. Cox made the plans and drawings, cleaned and studied the coins, and worked on the reconstruction and preliminary classification of lamps. Miss Virginia Grace had charge of a section

and over three hundred in length, though originally it must have been somewhat longer. The north slope is gentle and as it faces toward the modern town it has been encroached upon by buildings. The same is true of the northeast where the houses



FIG. 1.—GÖZLÜ KULE FROM THE SOUTHWEST. WALLS ON HILLSIDE MODERN

reach almost to the summit of the hill. Toward the west the mound has been cut off to provide a playground for a public school and in the section of the hill thus exposed one may see Roman levels and the walls of a large building of earlier times, and gather potsherds which range from modern times to the later phases of the Bronze Age. Only the steep southern slope is unencumbered. The mound has, of course, suffered the fate of all ruins in the immediate neighborhood of a city with a continuous history covering several millennia. It has been terraced for agricultural purposes and it has been quarried for stone. It has been used as a cemetery and pitted by the drainage systems of recent and mediaeval buildings. But during all the preceding centuries it suffered no damage comparable to that inflicted upon it by the military operations of the French in 1921. Much of our time this year was spent in digging out the fill of war trenches so that it might not confuse the evidence of neighboring undisturbed areas, of removing dugouts and blasting out gun emplacements and concrete foundations. But here the tale of our woes ends. Many undis-

of the field work and helped with the inventories. Miss Hoskin did both field work and photography, not only taking but developing all our pictures, and Mr. Ehrich combined field work with the duties of anthropologist and foreman. Bay R. Yalgin, the present director of the Adana Museum, represented the Turkish government. He was most helpful to us in far more ways than his official duties required and I take this opportunity of thanking him.

turbed areas can still be found and the core of the mound is sound. It has already yielded an unexpectedly large amount of fine material from Islamic¹ to late Bronze. Age and toward the end of the 1935 campaign we isolated an area at the very summit of the mound where the stratification begins directly under the surface with about the first millennium B.C. The scientific purpose of our work, that of establishing the cultural sequence in the Cilicia of prehistoric times, is thus assured of success in future campaigns. A large Islamic building in an excellent state of preservation and dated by Abassid and Seljuk coins has been excavated and it is only the Roman period which is at present represented by material rather than by any well-preserved building. It is not, however, unrepresented by definite walls and levels.

The remains visible on the surface before excavation were a fragment of wall, constructed of river stones laid in concrete, on the south edge of the hill and a curved

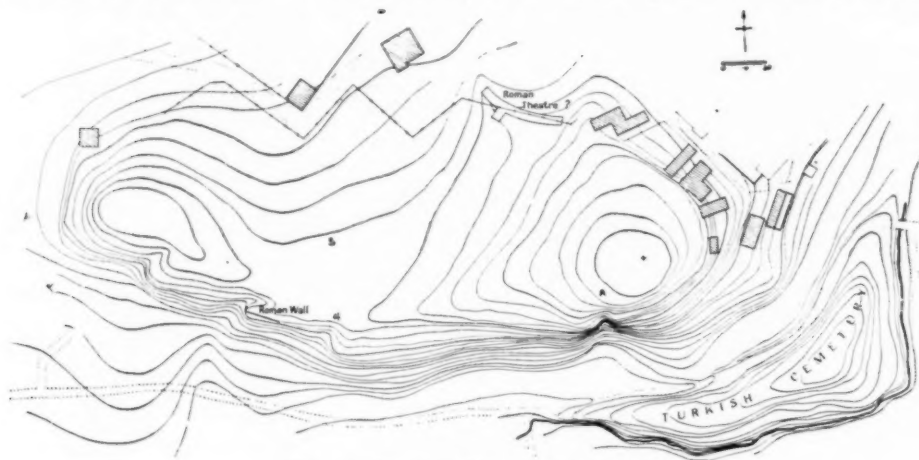


FIG. 2.—CONTOUR MAP OF GÖZLÜ KULE

wall of similar composition on the north side. The Roman city occupied the site of modern Tarsus. The enormous vaults which underlie the grounds of the American Tarsus College are sometimes identified with the ancient hippodrome. Part of the Roman wall of brick with a gateway leading to the sea is still preserved southwest of the hill and its line can be traced in a succession of irregular elevations to the south. The Turkish cemetery marked upon the plan shows the sharp return towards the north. Its continuation is lost in the modern town.

The mound of Gözlü Kule was twice dug, not with systematic excavation in view but in a search for antiquities. The British consul Barker recovered quantities of broken terracottas and some lamps in 1845 and Langlois, stimulated by the Englishman's success, made a similar search for figurines in 1852.

The excavation of the mound has started at three points. In each case an exploratory trench was first dug to a depth at which some substantial walls were

¹ Islamic is used as a generic term to cover all post-Roman material. In view of the early Arab invasion of this region and the almost complete absence of Byzantine coins at Gözlü Kule, it seems justified.

struck or, if there were no remains of buildings, an undisturbed stratigraphic level, and then the trench was widened following the indications of the trial trench.

There was every reason to suppose that the highest point of the mound would have the most important buildings. Our first trench, Number Three ¹ (2.00 m. by 30.00 m.), in charge of Mr. Ehrich was, therefore, laid out on the summit and later widened into Section A, which, before we had finished, comprised an area of six hundred and seventy-five square meters. After a fairly modern Turkish building and some fragmentary walls of the same period had been removed it fell naturally into two parts, the southern and the northern, clearly separated by a difference in the color and quality of the earth and of the finds which went with them. To the north, that is toward the Roman town of Tarsus, Roman remains were found to a maximum depth of 8.39 m. In the upper layers they were mixed with Turkish and Arabic glazed pottery, but at about 5.20 m. (2.00 m. below the surface) ² a vast quantity of



FIG. 3.—PLASTER MOULD AND PLASTOLINE IMPRESSION. BEARDED HEAD TO RIGHT

broken terracottas and lamps of uniform character were recovered together with plaster moulds, many of which were still in good condition. Fig. 3 shows one of the finest, which perpetuates a Hellenistic type representing either Zeus Ammon or Asclepius as he appears on coins of Pergamon. The terracottas had for the most part some flaw and the lamps were untouched by smoke or flame. The floors of two clay-lined ovens or kilns came to light. Undoubtedly we had found the site of a factory and the débris was composed partly of defective material which had been discarded, partly of unsold wares. Of the building belonging with this material nothing but the most fragmentary bits of unrelated walls were found. But aside from the ovens, two floor levels (\otimes 5.20 m. and 5.90 m.) were isolated and broken fragments of the mosaics, plaster architectural mouldings and fresco which must once have ornamented it. While the difference in level of the floors clearly points to two buildings rather than the renewal of the pavement of a single building, there was no difference in the character of the material that accompanied the two. The absence of anything in the way of coherent walls may easily be explained by the

¹ Trenches 1 and 2 were dug during the soundings of 1934.

² All measurements, unless otherwise stated, are given in relation to the one fixed point marked on the plan.

fact that in this area there were no less than twenty-nine intrusions, cesspools or drainage pits of Turkish and Arab houses, which penetrated sometimes to a depth of more than four meters.

The terracottas represent the products of a native workshop and so are of interest in spite of their rather poor quality. The use of worn plaster moulds doubtless accounts for the lack of definition in the modelling. The manner in which they were put together precluded the possibility of our finding any complete figurines. Indeed I believe that many of the pieces we found had been discarded or abandoned before they had been combined into a whole figure. The torso was made, as a rule, in two pieces, back and front separately. The head, all limbs or separate parts, such as wings or objects held in the hand, were made in individual moulds. The joining was done by means of plaster, either by hollowing out both ends of the joint or merely by



FIG. 4.—FRAGMENTARY
LAMP DISK. HELMETED
ATHENA

scarifying the surface and filling the incisions. Terracottas so combined would naturally fall into their component parts at the first shock. The smooth contact surface of many of the separate arms and legs proved that they had never been joined to a body. For the most part the figurines showed no traces of paint. The vast majority were either theatrical masks or victorious charioteers and horsemen. Horses too were numerous. Our factory evidently catered primarily to the needs of the theater and the hippodrome.

The lamps display a great variety of subjects. While chariot races and gladiatorial combats were represented, others seemed to be concerned with the service of the temple. A large number of deities are depicted: Artemis, Athena (Fig. 4) and Apollo of the Olympian hierarchy, Pan in a great variety of attitudes; Bacchus and the head of Helios with radiate crown; Serapis and Isis both together and singly. Of the types going back specifically to Hellenistic times for their inspiration one may mention the city goddess Tyche with turreted crown, who sits on a rock and rests her feet on the river Kydnos, represented by a swimming half-figure. Animals are very popular, especially the deer and the sacred humped bull of Isis, and are drawn with considerable realism. Floral and geometric designs, frequently executed with a refined touch, are also common. The lamps are all unpainted and the fabric for the most part, though not invariably, thick. The products of the factory are dated by associated coins to about the middle of the second century A.D.

Below the level of the lower of the factory floors another Roman building came to light (± 6.60 m.). Toward the northeast it runs into the side of the trench but enough has been excavated to show that we have probably uncovered the foundations of a stoa. Absolutely nothing of the superstructure was preserved. In its present state it consists of one long wall running northeast-southwest (width ca. 1.20 m.) for some fourteen meters and two, possibly three, cross straps. The building, while of little importance in itself, is of interest in the history of the mound for two reasons. First, because another large deposit of terracottas and lamps was found in a fill which ran partly under the long wall and partly in front of the stoa. It is this which marks the

final appearance of Roman material at a depth of 8.39 m. Secondly, because, except for this fill which is in the nature of a pocket or hollow, it marks the end of the division of Section A into an older and a later deposit. Under the stoa the material in the trench becomes uniform.

The terracottas and lamps of this fill form a striking contrast to those of the factory in both technique and subject. In quality they are very much finer. The figurines are made for the most part in only two pieces. The lamps are frequently covered with a good black or red glaze paint, the disks are exceedingly thin, and the subjects are executed in high relief with clear definition.

Among the figurines Herakles, both as the youthful hero (Fig. 5) and as the tired bearded giant of Lysippean conception, is the god most frequently represented. Doubtless he is the Herakles-Sandon worshipped in this region. Hardly less numerous are the statuettes of Hermes. The fine head of Serapis (Fig. 6) is unique, but Apollo with his lyre is represented by many fragments. In a draped figure, we may see Hera and in the nude goddess with the crescent diadem, Aphrodite. Cupid as Victor with palm and wreath seems to represent an earlier and less realistic version of such figures as the triumphant charioteer with reins knotted about his waist. Cupid displaying the mask reminds us again of the theater and the realistic figure of a man (Fig. 7) with emaciated body and overlarge head wearing only a Phrygian cap and loin cloth may well be a Mime dancer impersonating a slave.¹ Fig. 8 shows a bust of a young girl of peculiar and rather touching loveliness. It is set in a medallion which forms the center of a temple pediment. We have portions of the supporting columns and stylobate. Similar representations of temples are by no means rare among our terracottas but of no other have we the tympanum preserved and none equals this one in fineness of execution. It seems nearer to the medallions of silver vessels. The large masks found in such numbers in the factory débris are entirely wanting. Fig. 9 illustrates a vitreous glaze vase of which only the base is completely missing. There were numerous fragments, both here and in Trench Six, of the green glaze ware which has long been associated with Tarsus. The miniature clay disk, Fig. 10, shows a Herakles head of well-known Hellenistic type. It appears on coins of Aegaea of the second and first centuries B.C. I had first thought of an impression from an intaglio gem, but the coarseness of the ear in contrast to the delicacy of the rest of the cutting makes this doubtful.

The lamps from this fill belong for the most part to types that can be illustrated in many parts of the Roman Empire. Hermes hurrying along with his caduceus and his money bags (Fig. 11), Zeus with his eagle, a composition of hieratic dignity which seems to foreshadow Byzantine compositions, the playful Cupid (Fig. 12) and the Cupid as Herakles (Fig. 13) are all well-known types. The running deer is represented at Tarsus in innumerable examples, so that one would like to think of it as a local product. The monkey eating grapes (Fig. 14A), of which the Metropolitan Museum has an example from Cyprus, and the bird pecking fruit (Fig. 14B) illustrate the delightful genre subjects of which Tarsus yielded a great variety.

The evidence of the coins found in the fill points quite consistently to the first centuries B.C. and A.D. After the material has been studied it will doubtless be possi-

¹ I owe the suggestion to Professor Bieber.



FIG. 5.—YOUTHFUL HERAKLES WEARING A CROWN OF LEAVES AND HOLDING A PATERA IN HIS R., CLUB IN L. INV. 1207—T282. H. 0.218 M.



FIG. 7.—MALE FIGURE WEARING A PHRYGIAN CAP AND LOIN CLOTH. INV. 789—T247. H. 0.15 M.



FIG. 6.—BEARDED SERAPIS WITH CROWN OF LEAVES AND MODIUS. INV. 711—T236. H. 0.072 M.



FIG. 8.—MEDALLION WITH BUST OF YOUNG GIRL. INV. 714—T239. H. 0.109 M.



FIG. 9.—DEEP BOWL WITH OVERHANGING RIM. GREEN VITREOUS GLAZE INSIDE, YELLOW OUTSIDE. ORNAMENTED WITH ROWS OF RED, YELLOW AND BLACK BOSSES. INV. 774—P129. H. 0.09 M.

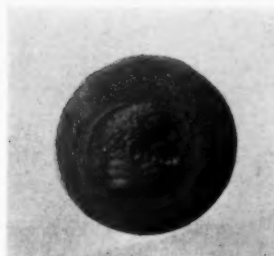


FIG. 10.—BEARDED HERAKLES WEARING FILLET AND WREATH. INV. 815—T252. D. 0.0285 M.



FIG. 11.—BROKEN LAMP DISK. HERMES HURRYING LEFT WITH MONEY BAG AND CADUCEUS



FIG. 12.—BROKEN LAMP DISK. CUPID PLAYING WITH DOG. INV. 947—L209



FIG. 13.—RED GLAZE ROMAN LAMP. CUPID AS HERAKLES. INV. 566—L116. L. 0.098 M.



FIG. 14.—A. MONKEY EATING GRAPES. INV. 959—L221
B. BIRD PECKING FRUIT. INV. 952—L214
BROKEN LAMP DISKS

ble to date it even more closely. The bulk of it must, for the present, remain unillustrated. This is especially true of the vases which have not been mended; they include, however, in support of the suggested date, a number of stamps *in planta pedis*.

In sinking the foundations of the stoa, the walls of an early house which lay to the west were partially destroyed. At present only one long wall exists, the western, and that not in its full original length, and a cross wall, also incomplete, with a doorway (\otimes 5.65 m. at doorway). Two floor levels were found and underneath,



FIG. 15.—NARROW-NECKED JUG WITH MATT PAINTED ORNAMENT. INV. 618—P45. H. 0.22 M.

the fragmentary wall of a still earlier building of which part of the floor and a stone door socket were preserved. It was important as the source of our first painted pottery (Fig. 15), a jug of Syrian affiliations.

The north end of the area was left at the stoa level. To the south a soft fill containing a kind of plain pottery with heavy wheel marks of brownish yellow clay—perhaps drab would best describe the sad impression it makes upon the eye—reached practically from the surface to a depth of roughly six meters. No walls and no floor levels were found in this fill. The Roman buildings must have backed against it. Two theories are possible. Either the Romans cut through the fill on the south side in order to create a level space for their buildings or the fill itself was piled up by the Romans when they dug their foundations. I incline to the former theory because

of the absolutely uniform ceramic content. Had it been created in Roman times some contemporary refuse must, I think, have entered into its composition.

It is all the more apparent that this deep deposit without structures must be an artificial fill from the fact that directly to the east about three meters to three fifty under the bench mark and only about two meters under the soil we found, shortly before the excavations closed, the remains of a very large building¹ with heavy walls, 1.20 m. in width, partly of unburned brick and partly of drylaid broken stone. Of this we have excavated part of one large room and an adjoining smaller room with cement floor, labelled provisionally the bathroom. The pottery here is precisely the same in character as that of the fill. Shapes recovered thus far include a lentoid flask with a single handle, resembling some found in Cyprus and Ras Shamra in late Bronze Age context, shallow bowls and plates, and narrow-necked jugs. Nothing more can be said before the material has been mended. Some of the plates have incised symbols which resemble Hittite hieroglyphs (Fig. 16). We are not as yet in a position to date the pottery with any accuracy and I have chosen 1000 B.C. as a mean date although some of the evidence, like that of the flasks, points to a somewhat

¹ This will in future be referred to as the three meter level house.

earlier period. Sherds of a rather heavy black to gray wheel-made fabric with white-filled incisions are sometimes found with it. This ware is generally classified as early Iron Age and has northwestern connections reaching to the Danube. Iron Age pot-



FIG. 16.—SHALLOW BOWL OR PLATE WITH INCISED SYMBOL



FIG. 17 A (ABOVE): HALF-LENTOID SEAL OF STEATITE. CROSS WITH TRIANGLE-FILLED CORNERS. INV. 811—S2. D. 0.028 M.

B. (BELOW): POST-HITTITE SEAL OF RED PORPHYRY WITH CONVEX SIDES INSCRIBED WITH HIEROGLYPHS. UPPERMOST, WINGED SUN DISK. INV. 1001—S8. D. 0.024 M.
C. IMPRESSION OF B

tery of the Cypriote variety appears directly above and it is impossible to say at present whether our brown pottery should be assigned to the last phases of the Bronze Age or to the beginnings of the Iron Age. While we have already found a great deal of Cypriote

Iron Age pottery, very few pieces were in well stratified areas. The largest amount came from the fill of a war trench. Likewise in the earth about one meter above our house (⊗ 2.00 m.) and in connection with a fragmentary wall, appeared the post-Hittite seal (Fig. 17 b, c) of red porphyry with hieroglyphs on both of the convex sides.¹

From between the west wall of the three-meter-level house and the drain which carried off the water from the "bathroom" came one of the most important finds made this year at Tarsus. It is a bulla (Fig. 18) showing the impression of a type of seal known so far only from the Hittite capital at Boghaz Keui. In the raised center are four Hittite hieroglyphs and around it a cuneiform inscription. Dr. Gelb, who saw the bulla after the Tarsus finds had been transported to Adana, read it as follows: Iš—pu—(destroyed)—šu—lugal—gal—dunu (or dumu)—iz—ri—ia—wa—at—ri

Iš—pu—x—šu, The Great King, son of Izri(i)awa(a)tri.²

The symbols or hieroglyphs he interprets as follows, beginning with the solid triangle and reading to the left: stone, King, seal, Tarhuns (or Shantash). While the name of

¹ All of the Tarsus seals were dated for me by Dr. von der Osten from photographs of plastoline impressions and of the stones themselves.

² Dr. Gelb draws my attention to the possibility of identifying this ruler with the Išputahsu, King of Kizwatna, who entered into an agreement with the Hittite King, Telepinu (Güterbock, *MDOG* 73, p. 33). Kizwatna could therefore be identified with Cilicia. The date of Telepinu seems early for our bulla. Possibly a later King of the same name. We are in need of further documentary evidence.

Izri(i)awa(a)tri is not known from the Hittite annals, it seems possible that we have here the seal impression of a Hittite Great King. Given the well-attested Hittite conquest of Cilicia, the piece may have been sent from the capital to the governor or prince of the subject city. It could not have been attached to a document, as the conical end is not pierced for the passage of a cord. The other possibility, that a local Cilician ruler assumed the title of Great King, would have far reaching historical implications.



FIG. 18.—CONICAL BULLA. HITTITE HIEROGLYPHS, CENTER, SURROUNDED BY CUNEIFORM INSCRIPTION INV. 998—S6. D. 0.024 M.

If the relative position of these two seals is of significance we would get 1200 B.C. as a *post quem* date for the layer directly under the soil—the two meter level—and for the three meter level—that of our large building—one between the date of the conquest of Cilicia and the fall of the great Hittite empire around 1200 B.C.

Returning now to that part of section A which lies more directly south of the Roman stoa, we find at the edge of the hill a heavy terrace wall of large broken stones (width 1.50 m.) with straps running out from the southern face. At the base of the wall to the north there was a covered drain and remnants of a pebble pavement. Undoubtedly this represents a street. While the terrace wall itself was preserved for a length of only 8.50 m., its course could be followed some meters further toward the east by a band of soft earth of about the same width and aligned with it. This is the fill of a trench left after the stones had been removed.

The terrace wall and accompanying street ran uphill from west to east. This wall was removed in order to trace the course of an earlier one (Fig. 19) (± 5.80 m.), a part of which had appeared in trial trench Two A of the 1934 soundings. Unlike the wall at the higher level this one runs an even course for over twenty meters. At present it disappears into an unexcavated area toward the east. It forms the back of a building unit which centers around a paved court. Rooms A and B have access to it by means of staircases. To the east of C there is another partially excavated room, D, connected with C by a doorway, but probably a later addition. Toward the

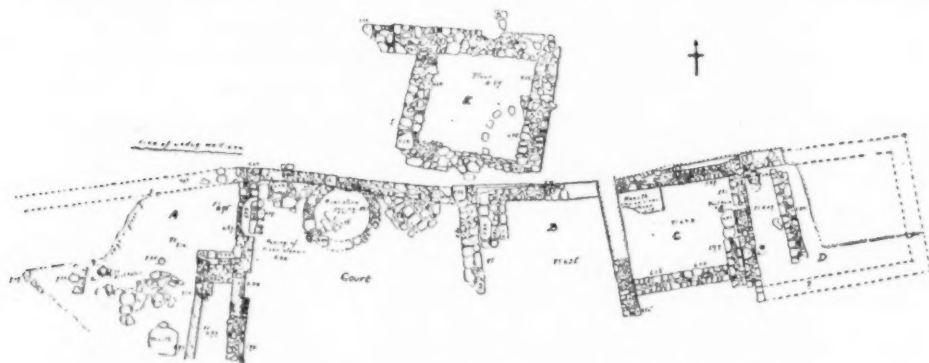


FIG. 19.—SECTION A. BUILDING UNIT CENTERED AROUND PAVED COURT

south this whole complex is sharply cut off by a terrace of fairly modern times. Undoubtedly it was for agricultural use.

Room A evidently had an inner staircase which led to a second story. Three stone steps are in situ and the line of brick wall of which the foundation remains must have supported the continuation in wood of the upper flight of steps. Of this room, which had suffered a powerful conflagration, nothing more can be recovered than what already appears on the plan, as both the north and west walls have been destroyed by war trenches. It is difficult to say what the circle of stones in the court represents, possibly the base of a water container or silo.

The pottery from this complex has not yet been studied, but at least two pieces have Hittite parallels. One is only a fragment of polished red ware, the other a large rectangular tub (Fig. 20) ending below in a pithos-like base. The shelf-like protrusion which belongs inside is shown on the edge of the vessel. It was found in unburned earth about 0.40 m. above the burned fill of Room A. It may therefore be somewhat later than the contents of the room itself. Dr. von der Osten tells me that there are similar tubs from Alişar, but without the pointed base. A steatite cylinder seal (Fig. 21) was found near it. It depicts a kneeling harper surrounded by animals: a lion, a goat, two scorpions opposed and a horse (?) with hobbled feet and a bird perched on its back. One thinks of some form of the Orpheus legend. It may be dated around 1000 B.C.

Room E of a house lying to the north of this complex was covered by the angle of wall belonging to the "bathroom" of the three meter building. Its floor was practically one meter under that of the bath. It contained a mass of broken pottery out of which we were able to reconstruct more or less completely sixteen shapes. Figs. 22 and 23 represent the best preserved pieces. It is my present opinion that this pottery probably belongs to the late Bronze Age, not only because of its stratigraphic relation to the building of the three meter level, but because it corresponds in character to the pottery found during our 1934 soundings at the highest level of such mounds as Zeytin and Kabarsa which ceased to be inhabited at the end of the Bronze Age.¹

Before leaving Section A mention must be made of two seals of typical Anatolian shapes and patterns (Figs. 24b, 17a), which came from disturbed areas.

The second of our trenches, Number Four, which later developed into an area of about four hundred and fifty square meters was started on the southern slope, somewhat to the west and just below the only completely level space on the present top of the hill. It was in charge of Miss Hoskin. Our first cut, measuring two by seventeen meters, lay, unfortunately, directly in the line of a war trench, except for a small undisturbed area toward the northwest where some dressed wall blocks were found in situ. Abandoning the rest of the trench when it had reached the level of a broad foundation of modern concrete, the lead of these stones was followed toward the west. They proved to be part of a circuit wall (Fig. 25) of at least three periods which, with slight interruptions, was traced for a length of about fifty-six meters.

¹ At Kabarsa there was also a later settlement, but not at the top of the mound itself. It occupied a lower level. Zeytin is the Kestelin Hüyükü of Dr. Gjerstad's catalogue of sites.



FIG. 20.—TUB WITH PITHOS-LIKE BASE. BURNISHED RED SLIP ABOVE. WHEEL-LIKE CIRCLES WITH PLASTIC CENTERS RESERVED IN CLAY. INV. 1199—P340. H. 0.88 M.



FIG. 21.—IMPRESSION OF STEATITE CYLINDER SEAL. ABOVE: MAN WITH HARP, GOAT, HOBBLER HORSE. BELOW: OPPOSED SCORPIONS, LION. INV. 999—S7. L. 0.016 M.



FIG. 24.—A (ABOVE): STEATITE SEAL OR AMULET WITH FELINE ANIMAL. INV. 812—S3. H. 0.024 M. B. STEATITE BUTTON SEAL WITH LOOP HANDLE. SPIRALS RADIATING FROM CENTRAL ROSETTE. INV. 813—S4. D. 0.021 M.



FIG. 22.—NARROW-NECKED BEAKED JUG OF GREENISH YELLOW CLAY WITH VERTICAL STREAK POLISH.



FIG. 23.—DEEP FOUR-HANDLED BOWL PARTLY COVERED WITH BURNISHED BLACK SLIP. INV. 1177—P319. H. 0.159 M.



FIG. 27.—COMIC ACTOR. INV. 455—T149. H. 0.10 M.



FIG. 29.—BROKEN LAMP DISK. METAL WORKER WITH FOOT ON BELLOWS, TONGS BELOW. INV. 443—L94. D. 0.071 M.



FIG. 28.—ANTHROPOMORPHIC LAMP. INV. 377—L81. L. 0.83 M.

It there disappears into the side of the trench and, to judge by the sharply defined profile of the hill, probably continues all along the southern edge. In this campaign no attempt was made to follow its eastern course. In spite of the fact that much of it has been cut off by the war trench I do not doubt that at least patches of it could be picked up in this direction. The description of the wall follows its course from east to west. At its present eastern end the wall is composed, for a length of eight meters, of two rows of squared blocks, backed by a carefully laid line of broken stone. In front ran a drain, masked to the south by a thin wall of well-cut blocks, probably of



FIG. 25.—GENERAL VIEW OF CIRCUIT WALL, SECTION 4. IN THE FOREGROUND A WAR TRENCH

somewhat later construction. The continuation of the wall to the west is composed wholly of uncut stone and the purpose of this patch of cut blocks is not clear. At the point where the section of dressed blocks ends, a drain running north-south abuts on the wall and a larger drain, with similar orientation but no present connection with the wall, lies somewhat east of it. It was the source of some interesting pottery and terracotta figurines.

Although this wall has a thickness of slightly less than two and a half meters and a well-defined face to north as well as to south, it is not, in my opinion, a complete structure in itself but only the outer line of a double wall. One meter seventy to the north a small piece of the inner line is still preserved, measuring only ninety centimeters in width. No remains of a rubble fill were found, which is not surprising as only the lowest course is still standing. This gives for the original circuit wall a

width of approximately four and a half meters. At twelve meters a broad platform of flat stones connects the two walls. I take it to be the foundation for a gate. This was later overlaid by a diagonal wall of broken stone, among which lay embedded a bit of the fluted shaft of a column of either the Ionic or the Corinthian order. It is crudely cut and looks late. At a still later period, a concrete wall in which layers of small river stones were regularly laid was poured against the face of the diagonal

wall four and a half meters from its start. Two chambers of this wall were found intact, the third was broken off by a modern trench. It was the outer face of one of these chambers which showed on the surface. This concrete structure seems to have been in the nature of a patch to repair a breach, for some eleven meters to the west we picked up a piece which corresponded in width (1.70 m.) and construction with the diagonal wall and agrees in alignment with the concrete patch.

Overlying the whole area of this defensive system was a Roman cemetery. We opened fifty-three graves in this region and three more of a similar type in the southwest corner of Section A. It therefore seems probable that this cemetery at one time stretched along the whole southern edge of the hill. The graves were of three kinds: pithoi, tile graves (Fig. 26) and cists with cover slabs usually of stone but sometimes of tiles. The vast majority belonged to the second class.



FIG. 26.—TILE GRAVES FROM THE ROMAN CEMETERY, SECTION 4

These graves varied much in the care with which they were constructed, but the best consisted of from three to four pairs of flat roof tiles set on edge to form a long tent. The ends were closed by similar tiles and the ridge by small curved cover tiles. Many of the tiles were stamped ΠΕ. The graves were not rich: an occasional bronze bracelet and more frequently a glass bottle composed the funeral furniture. The best of these, from Grave Three, is a moulded vase of yellow glass with identical heads in Janus arrangement. In the same grave was a coin, pierced for suspension, with the head of Constantine the Great, and a small bronze bell. While an object so small as a coin could easily have sifted into the grave with the earth, the fact of its having been worn makes it more probably the property of the little boy in the grave. The coins found in connection with this cemetery show that it was in use during the second and third centuries of our era and the evidence of the lamps points to the same period. We are thus provided with an approximate *ante quem* date for the wall which the graves either overlay or broke.

Before leaving this region mention must be made of the earliest of all the walls. It is of crude brick and runs in a straight line under the drain forming the southern edge of the section with cut blocks. It then bridges the space of the diagonal wall and disappears again in part underneath the southern face of the concrete

repair. It cannot possibly have been a circuit wall, as it is only sixty centimeters thick and has more the appearance of an enclosure wall for a court or garden.

I illustrate a few of the finds from this region because of their intrinsic interest. They have little stratigraphic significance. The comic actor (Fig. 27) came from the fill of the concrete chambers, which, at a lower level, were the source of our only authentic Attic piece: the fragment of a "Kleinmeister" kylix. The anthropomorphic lamp (Fig. 28), unique among our finds, and the lamp disk (Fig. 29) came from south of the wall and the charming "Aphrodite" (Fig. 30) from just below the war fill of our original trench. By far the most important find from this region was, however, a Babylonian cylinder seal (Fig. 31). It lay just north of Grave Nine.¹ It is a dedication of one Parišul to Ninšubur, minister or priest of Anna, goddess of heaven. Ninšubur is an Uruk deity. It probably dates from the years between Hammurabi and the Kassite occupation.

An extension of Section Four made towards the north measured roughly ten by fifteen meters. In spite of much disturbance it was possible to isolate definitely an Islamic and a Hellenistic level represented by both buildings and pottery. The intervening Roman level is less clearly defined. Directly under the surface were recent burials, some probably as recent as the world war; also fragments of modern houses. The first important structure was a long wall, of broken stone and tile in poured cement, running approximately east-west and averaging about a meter in width (\pm 9.30 m.). This was uncovered for a length of ten meters. In front, unevenly spaced but about two meters to the north, stood a row of roughly circular piers of construction similar to that of the wall. Of these, six were uncovered. They seem, however, to continue into the undug sides of the trench and may represent the foundations of one side of an arcaded street of Islamic times. A complex of walls to the north belongs likewise to the Islamic period.

To the absolute level of about ten and a half meters can be assigned a well (1.00 m. by 1.00 m.) beautifully built of fitted stone slabs and provided on all sides with toe-holes for descent. It was excavated for a depth of twelve meters but is undoubtedly much deeper. To have struck a source of water it must have cut into the soil underlying the artificial accumulation of the hill. Around it there were traces of a pebble

¹ This seal was kindly read for me by a number of scholars, but Dr. Gelb is the only one who has seen the original.



FIG. 30.—FEMALE FIGURE, PROBABLY APHRODITE. INV. 198-T31. H. 0.062 M.



FIG. 31.—IMPRESSION OF CYLINDER SEAL OF RED AND WHITE MARBLE. SEATED DEITY AND STANDING WORSHIPPER. INV. 810-S1. L. 0.031 M.

and earth pavement and to the east a short length of wall parallel and evidently contemporary. I judge that the well lay in a court or street to the west of the building now represented by this wall. At



FIG. 32.—HELLENISTIC BATH IN SECTION 4. WELL OF ROMAN LEVEL TO RIGHT

the same level we found a curved drain of unusually fine stone and cement construction which ran sharply downhill towards the southwest. For the present, on the evidence of pottery, I assign the level at ten and a half meters to the Roman period. While there was some admixture of later material the bulk of the sherds were Roman.

Directly underlying the drain and at an average depth of eleven and a half to twelve meters lay a bath (Fig. 32) of Hellenistic date.



FIG. 33.—STATUETTE OF CRYSTAL. INV. 1000—SC7. H. 0.065 M.



FIG. 34.—PROFILE VIEW OF STATUETTE

It seems to be part of a very large complex, more of which appears in Section Five to the north. It is a rectangle (2.06 m. by 2.84 m.) of fine concrete with a pinkish cement surface. At one small point it is preserved to its original height of fifty-five centimeters above a bevelled edge which runs around the base. This bevel is inter-

rupted at three points on the north side: by the bath tub in the east corner, by a small water container in the west and by the floor drain which opens between them. The tub itself (0.90 m. by 0.60 m.) is of the type already in use at Olynthos before 438 B.C., with a seat and a circular depression for the feet of the bather. There was

no drain from the tu into the cemented room nor from the small tank in the other corner. On two sides parts of a supporting wall of clay on a stone foundation came to light and a wall of broken stone two and a half meters to the south seems, by level, alignment and dimensions to belong to the bath complex. The well from the upper level broke through it at this point. The north part of the area was left at this level as we hope in the next campaign to connect it with remains of the same building in Section Five. Toward the south, however, we continued to deepen the trench.

The next level of stratigraphic importance is that of a wall at about $\oplus 14.25$ m. to $\oplus 14.50$ m. of which the accompanying ceramic material belonged almost exclusively to the Cypriote Iron Age. It has not as yet been studied sufficiently to define the period more closely. This wall rests upon another of crude brick and illustrates the closeness of the successive building levels. Just below, and in what appeared to be an undisturbed stratum, we made what is certainly from the point of view of art our most important find (Figs. 33, 34). It is a statuette of translucent crystal slightly more than six centimeters in height. It represents a beardless elderly man with deeply lined face and aquiline nose standing with feet close together and folded hands. He is clothed in a simple robe reaching to the feet and originally probably wore a conical headdress of some precious metal. Only the supporting core of crystal now exists. A slight protuberance on the left side below the waist may represent the hilt of a dagger. Dr. Schaeffer, with whom I was able to discuss the statuette in Paris, very kindly showed me a small bronze statue of great beauty found at Ras Shamra. The headdress too was separately worked. In spite of the difficulties inherent in the material and the summary treatment of hands and feet, the statuette is in reality neither primitive nor crude. The surface is well worked and the curve of back and shoulders excellently indicated. The face has great character and individuality. The heavy jaw and aquiline nose look Hittite. The stratum at which it was found indicates a date shortly after 1000 B.C. but there was an intrusion of soft earth nearby and so small an object is easily displaced. There is little in Hittite art with which to compare it except large monumental sculpture. I hope our own excavations will eventually provide the necessary comparative material.

Three terracotta figurines from this region, found in intrusive earth, deserve mention. The head of a city goddess (Fig. 35) with strikingly individual features, and



FIG. 35.—MASK OF CITY GODDESS WITH
TURRETED CROWN AND VEIL. INV. 860—T258.
H. 0.14 m.

the head of a faun of Pergamene type (preserved height 0.19 m.) are of unusual size. The caricature (Fig. 36) is executed in a spirit of true comedy.

The work in Section Four ended with the partial excavation of a most interesting early building. When the bottom of the war trench had been cleared, a mass of burned and fallen brick was discovered which also appeared in the vertical cutting to the north. Here it reached at one point a height of about seventy centimeters. When the débris of fallen brick had been separated from the walls it became apparent that we had struck part of a large building complex destroyed by a tremendous conflagration. Huge portions of wall burned to the hardness of stone had toppled over and lay on the floor. The walls (average width 1.18 m.) are exceedingly well-built of brick on a foundation of stone. The only room completely excavated at present (Room II)



FIG. 36.—MALE HEAD CARICATURED. INV. 163—T21. M.M. 0.067 m.



FIG. 37.—ROOM I OF EARLY HOUSE IN SECTION 4 WITH ROOM III IN BACKGROUND

measures 4.70 m. by 3.10 m. A cemented area (c. 1.70 m. by 1.90 m.) with a very fine smooth surface slopes toward the northwest corner and is probably the floor of a bath or water tank. In the south wall there is a doorway (1.10 m. wide) with a charred wooden sill in situ. The north face of this south wall runs under the circuit wall but its width was determined by probing. To the north of Room II lay a formidable mass of fallen wall. As no true floor level could be found it may be either an area completely outside the house or an inner court. To the west the north-south wall showed on both sides the white dressed surface characteristic of inner walls, so that there is presumably another room (IV) in this direction. To the east we have Room I (Fig. 37), the full extent of which we cannot at present determine. It measures three meters from east to west and over eight in the opposite direction, up to the point where it runs under the north trench wall. The room was entered from the east by a wide doorway (2.00 m.). To the right of the entry it was partitioned by a thin wall of which the remains of fifteen post-holes, irregularly aligned and spaced, fix the position. A screen of wattle and daub or interwoven withes is indicated. It protruded about one meter sixty from the western wall up to a narrow cutting in the floor which probably represents the sill of a door or opening leading from the southern into the northern portion of the room. Just south of the screen, a circular hollow

about twenty centimeters deep (Diam. 0.60 m.) was surrounded by a partially preserved brick parapet. It is probably a cooking pit. The floor of the southern part was strewn with potsherds which, when collected, proved to belong to from four to five large straw-banded pithoi and a large number of plates or shallow bowls of the brownish yellow wheel-made ware characteristic of the three meter level house of Section A (see p. 534). One (Fig. 16, p. 535) or two were similarly incised with symbols resembling Hittite hieroglyphs. Mention should also be made of a red-slipped and burnished pot stand (Fig. 38). In the excavated portion of the northern section of Room I stands a raised rectangular hearth (0.64 m. by 0.80 m.) with a depressed center. The material is crude brick. A well-defined floor level and pottery to the southeast indicate that the broad doorway led not from out of doors but from another room (Room III). Nothing can be said at present of the plan of this building except that it is irregular and that the wide shallow Room I suggests the Hilani type.

Section Five, in charge of Miss Grace, was laid out to the north of Four, with which it will eventually coalesce. When the excavation closed they were separated only by the width of the railroad. The procedure was the same as elsewhere: an original trench two meters by twenty meters developed into an area of roughly three hundred and eighty square meters. Directly under the soil a number of late burials came to light but no modern buildings. At about one and a half meters



FIG. 38.—RED SLIPPED AND BURNISHED POT STAND. INV. 1162—P305. D. 0.147 M.



FIG. 39.—LARGE ISLAMIC BUILDING IN SECTION 5 FROM THE EAST

(± 11.00 m.) a street of the Islamic period was struck which varied very much in width but kept a fairly straight course. It ran downhill from south to north at a much sharper grade than that of the present slope. On the west it was bordered for part of its length by a heavy wall, of a type of construction peculiar to the buildings of this period. Large cut blocks were laid crosswise on a heavy foundation of stone and tile embedded in a coarse, rather powdery, black cement. Several walls ran off from it diagonally, but none of them could be connected with a house construction. They may have marked the boundaries of open lots or gardens. At certain points clay pipes passed through the wall which bounded the street and emptied into deep drainage pits built directly against it. As a rule these have the appearance of a truncated oval in section and are lined with thin bricks in regular courses. Many were closed at the top by a beehive construction of the same material. To the east lay the large Islamic building (Fig. 39) in connection with which, as indeed with the whole area at this level, numerous Abassid and a few Seljuk coins were found. In the construction, tile, stone and mortar were used and a great deal of cement on the floors. This seems frequently to have been added as a resurfacing after the flags in the room were worn hollow. The building measures approximately 12.70 m. by 9.70 m. It was entered by a doorway (width 1.80 m.) which led into a short corridor with small rooms at either side and a large one at the end. A piece of reused marble moulding served as a sill. The room to the right had a cemented floor and a tank-like arrangement in the corner, while the one to the left had no distinguishing features



FIG. 40.—HELLENISTIC BUILDING WITH EARLIER WALLS BELOW. SECTION 5, FROM THE EAST

except the wide double door by which it was entered. The large room at the end of the corridor had an elaborate succession of water containers and drains. Against the north wall there was a circular brick-lined structure with a depth of about ninety centimeters. Directly in front of it but in no way connected stood a built-in tank full of a rather greasy black substance. It was followed by a covered tile drain which ran the whole width of the room and evidently received the water or other liquid which overflowed successively from the circular and rectangular containers. A pot full of black coloring matter was also found near the house. I think our building must have been a dyer's establishment. We decided to leave it as a well-preserved monument of the Islamic period and to carry the excavation further only in the area to the west.

At a depth of about two meters below the soil (\oplus 11.50 m.), a Roman level was distinguished on the basis of ceramic evidence. Some walls of no great interest, but which give the broken outline of a rather large room, belong to this period. This whole region was dug by Miss Grace with great care, as we have here a better stratification from Roman to Hellenistic times than elsewhere. The Hellenistic level followed close upon the Roman and was indeed often disturbed by the buildings of the later period. There was a great deal of reusing and heightening of walls. A very large building (Fig. 40), standing in places to a height of over 1.25 m., now fills the major portion of the trench and continues under its sides in two directions. Immediately below but with a different orientation another wall complex is appearing. The pottery which has come from this level is of great interest as it shows relations with the interior of Asia Minor and with the islands. It is illustrated in figures 41 to 43.

The high-stemmed dish of so-called *Bucchero* (Fig. 41) is paralleled most closely in Samos, the *kylix* (Fig. 42) in Rhodes and the side-spouted pitcher (Fig. 43) in Phrygia, although examples of the last type have been found rather far afield. The Metropolitan Museum has a pot of similar shape from the excavations at Sardis. All three vessels suggest the same approximate date: late seventh to sixth centuries B.C. Consistent too with this dating are the fragments of *kylikes* of a very thin black-glaze



FIG. 41.—BUCCHERO HIGH-STEMMED DISH, DESIGN OF LOTUS IN RED AND WHITE ON INTERIOR. CLAY, LIGHT GRAY. INV. 1098—P270. H. 0.125 m.



FIG. 42.—KYLIX WITH PALMETTE IN INTERIOR. BROWN LUSTROUS PAINT ON YELLOW SLIP. INV. 1186—P328. H. 0.059 m.



FIG. 43.—SIDE-SPOUTED PITCHER WITH STRAINER. VERTICAL LUGS EITHER SIDE OF SPOUT. CLAY BUFF, SLIGHTLY BURNISHED. INV. 1099—P271. H. 0.09 m.

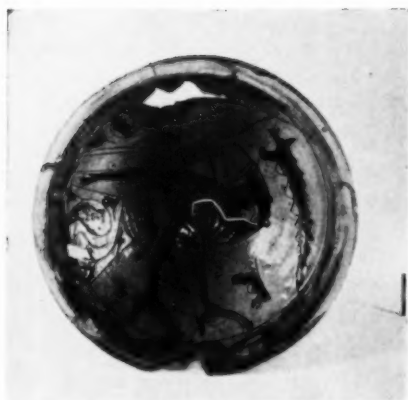


FIG. 44.—DEEP SGRAFFITO BOWL. DESIGN:
BIRD TO R. INV. 644—P72. H. 0.063 M.

ware, so hard-baked that it rings when tapped. Very little has as yet been done here, but the number and variety of the restorable pieces already acquired promises well for the future. A problem, too, raises its head. Nowhere on the hill have we found any material which could be assigned to the fifth and fourth centuries B.C.

Figures 44 to 46 represent individual finds from this trench. The bird on the Islamic sgraffito bowl (Fig. 44) is drawn with great boldness and verve. The Arab doll (Fig. 45) of carved bone is probably of the tenth century A.D. according to the dating of similar objects in the Benaki Museum at Athens. A great deal of fine

pressed ware, usually plain but sometimes covered with yellow or green vitreous glaze, was also found in the upper levels. Two of these vases have inscriptions in the square Cufic lettering. Fig. 46 is one of a number of similar figurines usually found in Cypriote Iron Age context, although the specimen illustrated came from intrusive earth. The feline on the triangular seal or amulet of Fig. 24a—is it our domestic cat?—is incised in very effective shorthand. Dr. von der Osten informs me that, although of an archaic type, this example belongs to a somewhat degenerate form current in North Syria between about 1000 and 600 B.C.



FIG. 45.—HEAD AND NECK
OF HUMAN FIGURE CRUDELY
CARVED IN BONE. INV.
568—B49. H. 0.056 M.



FIG. 47.—HEAD OF EL-
DERLY MAN WITH COARSE
FEATURES, BANDANA
AROUND HEAD. INV. 925—
T263. M.M. 0.53 M.



FIG. 46.—PRIMITIVE FIG-
URINE WITH BUTTON EYES
AND CURIOUS CAP. DETAILS
IN BROWN TO BLACK MATT
PAINT. INV. 1123—T272
H. 0.075 M.

The mass of concrete which showed above the surface along the north edge of the hill was superficially investigated by Miss Cox. It is thirty-six meters long, four and one half to five and one half meters wide, and approximately level on top. It stands to a maximum height of three meters on the north face. The whole forms an arc with a radius of about forty-five meters. On the north side a vaulted entrance now choked with stones is visible above the slope of the hill and there seems to be a corresponding hollow on the other side. The concrete mass is best explained as the back wall of the auditorium of a theater and the vault as one of the passages by which the cavea was reached. It was impossible to give more time to this excavation, but we hope to carry it further in a future campaign. Lying, as it does, practically in the town, it is most unlikely that any of the superstructure can be found. All the seats and wall blocks doubtless went into the making of modern Tarsus. One of the auditors seems to have dropped his ticket, for we found it in section A. It has on one side the number four in both Greek and Latin to meet the needs of the mixed population, on the other a head in profile, possibly a mask.

We have still to speak briefly of Trench Six, located at the base of the hill and at about the middle of the south side. It was started as an investigation preliminary to dumping earth and developed into one of the most prolific sources of pottery and figurines, chiefly of the early Roman type although later Imperial times were also represented. They were found to a depth of about five meters in fairly regular layers with earth between. This is, of course, not a stratified deposit but represents, I judge, material discarded at intervals from some building higher up which may have been a temple, as the débris included a number of small votive lamps and pots. Directly above the trench the slope of the hill is gentle and could very well be the site of a building resting on a terrace foundation. The material is very fragmentary. Barker already noted the broken condition of all the figurines with the commentary that the people had broken and discarded their idols. One is struck by the resemblance of many of our types to those of Alexandria. Fig. 47 from this trench, known to the excavators as "The Cilician Pirate" is an example of quite extraordinary and brutal realism. The use of plaster moulds is also best paralleled in Egypt.

Perhaps, in view of the interest in the "Achaean problem" of this region a word should be added about pottery of Mycenaean type. A very few fragmentary pieces, including the necks of two stirrup vases have turned up in unstratified areas as well as some pieces of local imitation. If there is a "Mycenaean" level it has not yet been reached.

HETTY GOLDMAN

NOTE.—A reading and interpretation of the bulla mentioned on page 536, by Professor A. Götze of Yale University will appear in the next issue of JOURNAL.

EXCAVATIONS AT TROY, 1935

PLATE XLIX

DURING the months of April, May and June, 1935, a fourth campaign of excavations at Troy was conducted by the archaeological expedition of the University of Cincinnati. As will be recalled, the undertaking was founded by Professor W. T. Semple, Head of the Classical Department in the University, and Mrs. Semple, who, in 1931, secured the necessary concession from the Turkish Government, and who have, since that time, made it possible to continue the work methodically from year to year.¹ It is a pleasure to refer again to the courteous generosity of the German Archaeological Institute which ceded to our expedition its rights to the site at Hisarlik and which has ever been ready through its officers to render us valuable advice and assistance. We are under particular obligation this year to Dr. Schede, Director of the Institute in Istanbul, and to his Assistant, Dr. Bittel, for much help of this kind.

The members of our staff this season enjoyed the privilege of a visit from Professor Dörpfeld whose fresh enthusiasm and keen perception gave as usual a stimulating encouragement to our work. Dr. Dörpfeld stayed with us a week, placing his great knowledge of the site freely at our disposal, and his illuminating observations aided materially toward our understanding of some of the perplexing architectural remains uncovered in 1934. Fully conscious of the great debt we owe him for his unstinted collaboration, we are glad to have this opportunity to express our gratitude.

Professor Dörpfeld has informed me that he is unable to accept the dating of Troy VI and VIIa which we proposed in our preliminary report for the season of 1934 (*A.J.A.* xxxix, 1935, pp. 16 ff.), and he has asked me to state his views. In that season we concluded from a study of the architectural and ceramic evidence that Troy VI came to its end, probably in a severe earthquake, not long after 1300 B.C.; that Troy VIIa, which immediately succeeded and which was constructed to a great extent of fallen material from the buildings of the Sixth Settlement, maintained its

¹ The regular staff of the expedition comprised Professor and Mrs. W. T. Semple, John L. Caskey, Dr. F. W. Goethert, Lewey Lands, Dorothy Rawson, Marion Rawson, Jerome W. Sperling, Margo Taft and C. W. Blegen, Field Director. Mrs. Blegen and Mrs. B. H. Hill also took part in the campaign from May 12 to June 5. As Commissioner, representing the Turkish Government, Remzi Oğuz Arik gave much useful aid. It is an agreeable duty, in behalf of the expedition, to extend our most cordial thanks to all members of the staff for the conscientious, industrious and understanding labor they devoted to the tasks assigned to them. Each was entrusted with the responsible conduct of excavation in one or more areas and with the preparation of a summary of the results obtained, and each was charged with further duties of a more general nature. Miss Dorothy Rawson, with the assistance of Mrs. Semple, again prepared the inventory of the many hundreds of objects of metal, stone, bone and terracotta. Miss Marion Rawson measured, described and recorded all the vases recovered intact or reconstructed from fragments. Mr. Caskey photographed the miscellaneous objects and the pottery and also continued to serve as bookkeeper and cashier. Mr. Sperling kept the inventory of coins and superintended the commissary department until he was obliged to leave for America on June 1. After his departure Dr. Goethert took charge of the inventory of the coins and Miss Taft, assisted by Mr. Caskey, looked after the administration of the household. Mr. Lands, as draughtsman, made measured drawings in all areas as required and also began a series of studies for an architectural inventory. The position of foreman was competently filled throughout the season by Emin Kani of Erenköy. The number of workmen employed reached a maximum of 115, most of whom were dependable veterans of our previous campaigns.

existence for approximately a century until it was destroyed, doubtless by human agency, in a great conflagration in the early years of the twelfth century; and that it in turn was followed at once by settlement VIIb, which is characterized by its continued use of Trojan monochrome ware in association with Mycenaean ware of a style similar to that of the Granary class, and with *Buckelkeramik*, virtually identical with that found in Macedonia. This chronological scheme is naturally provisional, pending the completion of our excavations, and it is offered subject to correction if new evidence is forthcoming; but it is fair to say that our observations during the season of 1935 have seemed to us to confirm it. Professor Dörpfeld holds that Troy VI was the seat of Priam, captured by Agamemnon; Troy VIIa (which he would prefer to call VIIb), the citadel of Aeneas and his descendants (*Iliad*, xx, 307), and Troy VIIb the settlement of the Trerians and Kimmerians who came to Anatolia from the European side in the first millennium B.C. Professor Dörpfeld's arguments, also based on the evidence of the architecture and the pottery, interpreted in the light of Greek tradition, naturally merit our careful consideration, and we are looking forward with much pleasure to the opportunity of discussing the whole problem exhaustively with him next season on the ground itself.

The work of the expedition in 1935 was directed toward the two objectives we have had in mind from the outset of our excavations at Troy. Our attention was thus mainly focused on the citadel itself, where our painstaking examination of the stratified deposit was methodically conducted in eleven different places. Outside the Acropolis our search for pre-classical tombs was also further prosecuted along the eastern and the southwestern slopes of the plateau of Ilion. The eleven areas of investigation on the citadel may be identified according to their position on Professor Dörpfeld's plan of Troy (*Troja und Ilion*, II, Pl. III) as follows: the first in squares C-D 2-3 on the northern slope of the hill; the second in A 2-3 somewhat farther toward the west; the third in the central part of the site in E 6; the fourth at the extreme west, in and west of A 4-5; the fifth in A 8; the sixth in F 8-9; the seventh just inside the South Gate, VI T, mainly in squares G 8-9; the eighth, ninth and tenth in Houses VI G, VI F and VI E, on the high terrace along the eastern side of the Acropolis; and the eleventh in squares J-K 6 between House VI E and the city wall of VI. In this report a summary of the results gained in each of these areas is offered in the order of the preceding list.

As recorded in our report last year, the removal of an immense amount of debris coming from Schliemann's excavations had revealed, in squares C-D 2-3 at the northern edge of the hill, an extensive area of undisturbed deposit belonging to Troy I; and a trial pit had shown that this accumulation in one place continued to a depth of some 4 m. before native rock was reached. Under the supervision of Mr. Sperling this area was methodically excavated in April and May, 1935. Immediately below the surface, which had formed the top of Schliemann's "platform," the foundations of a small house were uncovered. The walls, built of rather flat, unworked stones laid in yellow clay, were preserved on the north, east and south sides to a height of one to four courses; at the west very little construction remained in place, and perhaps most of this end had been left open as an entrance. The house apparently consisted of a single room, roughly rectangular in shape, ca. 4.50 m. long from east to

west and 3.15 m. wide. Two successive floors, separated by a sterile layer of yellow clay, and each sloping downward from south to north, were distinctly marked in the stratification; each was covered by black, carbonized debris, shells, animal bones and potsherds. In the middle of the north side of the house a fairly large area, not sharply defined, containing much burned matter, probably indicated the position of a hearth. On these floors were found some shapeless fragments of metal, apparently copper, part of an idol of marble, two fine celts, a polisher, and a pierced stone; seven well polished bones of different lengths, pierced for stringing, which probably once constituted a necklace, and two bone awls; two whorls of terracotta; two complete, though shattered pots, and great quantities of sherds from which it



FIG. 1.—HOUSE OF PERIOD Ia

may be possible to put together several additional vessels. The house probably belonged to an early stage of Ib or to a late phase of Ia.

Just beneath it we came upon the remains of a much larger house (Fig. 1), definitely assignable to period Ia. It is a long building doubtless of rectangular plan, though the east end has not yet been found. The north, west and south walls are substantially constructed of stones of moderate size, laid in yellow clay, and the herring-bone style of masonry seems to have been used in some places. The house is 7.10 m. wide, and its length must have exceeded 12 m. These dimensions are impressive in a structure belonging to so early a period; and the character of the house indeed indicates that already in the initial phase of Troy I civilization had made considerable progress. Rough stone foundations at two points in the long axis of the building suggest the possibility that there was a single row of posts or columns to help support the roof. The lengthy parallel walls uncovered by Schliemann in his North-South Trench, not far southward of our house, must be the remains of similar

establishments. In our house a well built doorway, 1 m. broad, occupied the middle of the west wall; its threshold was made of flat stones in several successive layers, presumably corresponding to like stages in the history of the floor which gradually rose in level, owing to the continual accumulation of *débris* upon it. Two pivot stones, at different heights, were found in place at the northern side of the door. The floor of the house yielded three shattered vases and masses of potsherds; also two stone idols, a quern, a grinder, a polisher, a whet-stone, and five bone awls. Under a small flat stone, just beneath the floor, in the southern part of the room we found the skeleton of an infant. Two further child interments came to light immediately outside the north wall of the house, one an ordinary inhumation, the other apparently an urn-burial, although the vessel had been crushed into small fragments.

Between the house and the northern slope of the hill a considerable area was excavated, and a relatively rich ceramic series illustrating the pottery of the early periods of the First City was obtained. These remains include floor-deposits from portions of four successive houses. The most notable small object is a somewhat crude female figurine of terracotta (Fig. 2).

Further exploration along the edge of the hill has demonstrated that the early sloping wall, a portion of which was long ago revealed beneath the Second City fortification in square C 3, and which we described in our report last year, is definitely to be ascribed to the First City. And it now seems practically certain that the great fall of stones unearthed in our trench in D 2-3 in 1933, marks the continuation of this city wall of Troy I.

Mr. Sperling also carried out this year some supplementary work in the broad trench we opened in 1933 through squares A 2-3. In the upper section of this area, above a ledge of native rock, part of one room of a house was cleared. The mass of blackened *débris* and red-burned clay covering the floor suggested that the building had been ruined in a fire, and the abundant yield of pottery allowed us to date the structure probably to the final phase of Troy II. In the lower section of the trench it was possible to expose hardpan for a considerable extent, and the successive strata in the deep accumulation of earth outside the circuit walls of the citadel were carefully examined. A collection of sherds was obtained from each of the distinguishable layers, and the study of this material should provide useful aid toward an understanding of the history of the site. A human skeleton found lying in a contorted attitude above a thick deposit dating from the Sixth City, and below the *débris* of Graeco-Roman Ilion, was the most curious discovery in this area. With the skeleton, probably dating from the period of Troy VII, were found five fragments of a bronze pin, a bead of paste and one of amber.

Our meticulous stratigraphic examination of the layers in the central part of the Acropolis, in square E 6, was again directed by Miss Marion Rawson who had



FIG. 2.—FEMALE FIGURINE OF
TERRACOTTA. TROY I

conducted the work in this area in 1933 and 1934, and the following account is taken almost verbatim from her report. Resuming operations here at a depth of ca. 5.35 m. to 5.85 m. below our datum point, Miss Rawson uncovered in the course of the recent campaign a new stratum of habitation, directly overlying the top of the city wall identified by Professor Dörpfeld as belonging to II a. These habitations have irregular floors, the lowest parts of which, at about 7.20 m., correspond in level with the threshold block of the Propylon, II C, that gave access to the court before the Megaron II A. The Megaron and the Propylon are assigned by Dörpfeld to the third phase of the Second City, II c; and the newly found stratum must presumably be attributed to the same epoch. The architectural remains brought to light within the area under investigation, what we have called the "island," constitute a complex of small rooms, some ten of which are partially or completely preserved, in association with a possible "court," a street, a narrow passage and a lane, as may be seen in the accompanying plan (Pl. XLIX). All these chambers had apparently been destroyed in a great fire, as a result of which they had become filled with burnt and carbonized matter, remnants of charred wood, partly baked bricks and calcined debris from their ceilings and roofs. To this conflagration, fortunate from our point of view, we owe the recovery, in more or less good condition, of all the objects that were abandoned in the chambers at the moment of the disaster. These objects comprise some 170 pots of many different shapes and sizes, some intact, the majority crushed and shattered, 174 miscellaneous items of metal, stone, bone, terracotta and clay and a collection of small gold beads; altogether, when the relatively small extent of the area investigated is considered, a gratifyingly rich yield of material for our study of this stratum.

These buildings differ not a little in style of construction from those of the superimposed layer, the substantial stone walls of which were described in our report for 1934. The builders of this early period seem to have been very sparing in their use of foundations; and most of the walls shown in our plan (Pl. XLIX) apparently rested directly upon the surface of the ground, with no substructure at all. The masonry itself is for the most part of inferior quality, loosely thrown together and of no great stability. Sometimes stones were used for the lower part of the wall and bricks for the upper, but often both materials are indiscriminately employed together. The face of the wall was no doubt regularly coated with a thin and rather fine plaster of whitish clay. As we dug down from above, the clearly marked lines of plaster sometimes gave the clue to the course of the wall before the body of the wall itself had become recognizable. In many places the plaster had been blackened and charred by the fire that overwhelmed the settlement.

The walls are rarely preserved to a height greater than 1 m., and often it is considerably less. The south wall of Room 202, with its top at 1.52 m. above the floor, is the highest survivor. Some of these walls were, no doubt, still visible when the houses of the next stratum above were erected and in a few instances they were made to serve as foundations for those later walls. But for the most part the orientation is somewhat different, and several of the rooms in the lower layer lie directly beneath the streets of the superposed stratum. It is therefore clear that with the floors at ca. 7 m. below our zero point, we have passed into an earlier period quite

distinct from that of the level at and above 5.85 m. What appears to be an intermediate stage, represented by some scanty remains of floors, pottery, etc., noted here and there at approximately 6 m. below our datum, might indicate a brief period of reoccupation after the destructive fire and before the erection of the succeeding town with its high stone walls and its new streets.

Several of the chambers belonging to the complex uncovered this year had been almost completely dug away in Schliemann's excavations many years ago, and are now recognizable only from small surviving portions. Thus Rooms 203 and 204, at the extreme western edge, and 209 at the eastern end of the "island" (Pl. XLIX) are merely corners of apartments that once extended far beyond; and Room 208, also at the east is a slightly larger remnant. A floor with a hearth was found in 203. Room 204 was filled with burned earth and fallen stones; Rooms 208 and 209 had apparently been built directly on the top of the fortification wall of II a. Despite the restricted area remaining, all these rooms yielded quantities of potsherds, from which several vessels can be reconstructed, and not a few objects of stone, bone and terracotta. Even in the little angle of our "insula" projecting southward beyond Room 202, a floor on which lay a jug, 59 pieces of flint, a stone pestle of a type familiar in Early Helladic Greece, and two whorls of terracotta, together with part of a curious structure of hardened clay, provided with a channel or a flue, perhaps an oven or kiln, gave evidence that a covered room had once existed here, and had been destroyed by fire.

Between Rooms 203 and 204 lay a street or an open passage leading into a broad court or yard from which three chambers were accessible, namely, Rooms 201 on the south, and 200 and 206 on the east. The street and the court were marked by the characteristic greenish yellow deposit filling them and containing quantities of sherds, bones, stones, etc.

The room on the south, No. 201, perhaps had an open portico facing the court; the room itself was certainly covered, for considerable burnt debris from the roof lay fallen above the floor. The earthen floor, on which rested many chunks of carbonized wood, was very uneven, but in general it sloped downward from the sides of the room toward the middle, where it reached a depth of ca. 6.45 m. below our datum. Remains of a hearth appeared in the northeastern corner. The room was filled with fallen stones, blackened and burnt rubbish and masses of partially baked bricks and clay. A great heap of pottery occupied the central part of the room and sherds were scattered about in quantities everywhere. The vessels in the heap were all badly crushed and broken, but fifteen of them have been put together and restored, comprising four flaring bowls, one coarse bowl, one basin with two handles, one stemmed cup (Fig. 3), one coarse cup with two handles, a delicately made ring-vase on three low feet with a tubular spout and a basket handle (Fig. 4), a squat jug with two handles, four high-necked storage jugs with two handles, and a red-polished, wide-mouthed jar. In addition to these complete pots, four baskets of sherds were collected. Other objects recovered in Room 201 are a chisel, a dart and a piece of flat wire of bronze; two serrated knives, a polisher and three mill-stones; a bone tube; four whorls of terracotta; two brush-handles and five loom-weights of clay.



FIG. 3.—CUP FROM ROOM 201



FIG. 4.—RING-VASE FROM ROOM 201



FIG. 7.—TANKARD OF RED WASH WARE



FIG. 8.—JAR FROM ROOM 206

Room 202, entered from 201 through a narrow door, 0.65 m. wide, is a small chamber almost square in plan, measuring 2.60 m. by 2.66 m. The walls, found standing to a height of 1 m. and more, were still coated with a plaster of white clay, in some places blackened by fire. The threshold of the western door was set at a level of 6.45 m. below our datum, but those who entered the room must have been obliged to step down, for the floor lay at 6.87 m. to 6.97 m. and deeper in spots. A semicircular structure of brick, resting on two courses of stone and faced with thin clay plaster, stood against the north wall, not far from the door; its purpose could not be determined. The room was filled with burnt *débris*, among which were many hard chunks of roofing, showing grooves where the clay had been laid on reeds. The sudden destruction of the building in a conflagration accounts for the preservation on the floor of twenty-one pots, undisturbed in their arrangement, though crushed by the weight of the material that had fallen upon them (Fig. 5). Only two vases had escaped intact, a coarse jar on a raised foot, and a small feeding bottle with a tubular spout on one side, a small vertical loop handle opposite it, and a basket handle across the top. The other vessels comprise, already restored, a wide-mouthed jar, four high-necked, two-handled jugs, a fifth smaller but with longer body, a squat jug, a small jug with one handle, a tall-necked jug on three legs, and a large two handled goblet of the kind in which Schliemann saw the Homeric "*depas amphikypellon*"; and, still awaiting restoration, two more large, two-handled jugs, a jug with one handle and a spout, a jug bearing plastic decoration, a one-handled, round-bodied jug, a small jug in black ware, a bowl with one handle, a fine two-handled goblet, and a small pithos. Two large baskets of sherds were also gathered from the fill; and the list of other objects includes a polishing stone, an obsidian chip, two millstones and a grinder; a bone awl; and seven spindle whorls, two of which bear incised decoration.

Access to Room 200, lying directly east of the court, was provided by a doorway, 0.60 m. wide, with a stone threshold at 6.50 m. below our datum. A pivot stone set inside showed that the door must have swung into the chamber. The latter is relatively spacious, measuring 4.60 m. from east to west, by 4.10 m. from north to south, although its eastern end seems to broaden out in an alcove-like extension toward the south. A second door 0.80 m. wide, with a threshold at 6.67 m., led eastward into the adjacent room, 205. The north, east and south walls of Room 200 are all party-walls, shared with the neighboring apartments; those on the north and east appear to have been damaged and reconstructed, although the meaning of a projecting stone foundation, parallel to and just inside the north wall, is not perfectly clear. At the eastern end of the room, south of the doorway, is a platform of stones, perhaps the remains of an earlier wall, behind which a gap in the stone party-wall has been repaired in crude brick. The whole room was filled with hard chunks of clay



FIG. 5.—POTS ON FLOOR OF ROOM 202

from the ceiling and with remains of crude bricks fallen from the walls, many pieces still retaining their facing of clay-plaster. Much of this material had been burned black, red, yellow or brown in the fire which had demolished the house. Some rather gruesome speculations were aroused by the discovery in this layer, of a fragment from the top of a human skull; was it perhaps a relic of some unfortunate occupant of the house who had lost his life at the time of the disaster? That explanation might have seemed logical and plausible had some traces of the remainder of the skull and the rest of the skeleton come to light; but there were no other bones that could be definitely identified as human. The presence of the fragment of the skull thus remains a mystery. Beneath the mass of wreckage many pots were uncovered, thirty-nine being still in a recognizable state; they had apparently stood,



FIG. 6.—POTS ON THE FLOOR OF ROOM 200

either singly or in groups, here and there on the floor, where most of them were shattered when the roof and the walls collapsed (Fig. 6). The floor itself, at 6.87 m. below our zero point, was well defined and hard in the western and southern parts of the room; but in the north-eastern quarter, a soft fill of ashes, earth and decomposed matter, containing many sherds

and bones, continued to a considerable depth, suggesting that a rubbish pit may have been dug beneath the floor.

Among the pots recovered, five were more or less nearly intact, four others have been put together, and the rest have still to be mended. There are no fewer than twenty-three jugs of various sizes and shapes, some with one handle, others with two, one with four, some with ovoid, some with rounded body, some with ear-like lugs, some in black, some in red-wash ware, one standing on three legs. Other vessels, the shapes of which could be determined, include a flanged cylindrical lid, two coarse basins, three flaring bowls with incurving rim, a wide-mouthed jar and a large storage jar. Among the miscellaneous objects, the first place is taken by a bronze knife with fragments of its ivory handle, which was fastened with rivets. Two pins and a flat ring of bronze; two marble idols, a flint knife, a stone loom-weight, three pounders and four millstones; four bone awls; two buttons, a small sphere, like a golf ball, with white filled impressions, and eighteen spindle-whorls (ten of which are decorated) of terracotta; and twenty-two loom weights of unbaked clay complete the list of objects from Room 200.

Opening out of Room 200 on the east, as we have seen, is Room 205, apparently once a long rectangle in shape. The southern part of the room was cut away in a

diagonal line by Schliemann; the remaining portion has a length of ca. 5.40 m. from north to south and a width of 2.30 m. In the north wall is a door, 0.90 m. wide, giving on a narrow lane that runs eastward. The threshold is laid at 6.43 m. below our zero point, but the floor inside is 0.22 m. deeper, sloping down toward the south to 6.97 m. at the edge of the "island." At this latter point, the top of Dörpfeld's city wall of IIa lies just beneath the floor. This room, like the others already described, was filled with fallen debris of bricks and roofing. The shattered pottery on the floor rested on thick strips of carbonized wood, evidently burned, perhaps from shelves which had collapsed, or from boards that had lain on the floor. Near the west wall, not far south of the door to Room 200, a roughly rounded pit, about 0.90 m. in diameter, had been dug through the floor to a depth of ca. 0.80 m. It was filled with a soft, burnt deposit of decomposed brick, and at the bottom lay a large millstone. The pit contained great quantities of potsherds and five recognizable vases, namely two small flaring bowls, two large jars and a lid in red-wash ware; also two spindle-whorls of terracotta. At a high level in the room in an area of burnt debris (lying just beneath the narrow street described in last year's report) which may perhaps represent a brief period of reoccupation after the fire, were found two vases, a large tankard in red-wash ware (Fig. 7, p. 556), and a shallow, bowl-like brazier. From the floor were recovered the broken pieces of sixteen pots, of which only two have yet been restored, a fine "*depas amphikypellon*," and a small flaring bowl; the others are nine jugs of various forms and sizes, a wide-mouthed jar, a flaring bowl, a basin and two large storage jars. Only a few miscellaneous objects came to light, comprising a large millstone, ten whorls of terracotta (two with incised decoration), two brush handles of clay, one in badly damaged condition, and a clay loom-weight.

Room 206, lying to the north of 200 and separated from the latter by a party-wall, also apparently had a door opening westward on the court. Two holes, 0.75 m. apart, filled with carbonized wood, may perhaps have served for the door posts, or for wooden jambs. The chamber was roughly rectangular with a length of ca. 4.80 m. from north to south, and a width of 4.30 m. At the northeast corner some traces of a possible vestibule or hall suggest that there may have been another entrance here. The whole northwestern part of the room was, however, removed by Schliemann and the plan on this side cannot now be completed. The rubbish filling the room to a depth of ca. 1 m. consisted mainly of soft, decomposed brick, with some chunks of harder clay from the roof. The floor was covered by a thick layer of carbonized matter and the objects in it showed clear traces of burning; there can be no doubt that this building, too, was destroyed by fire. The floor is uneven, sloping down from the walls to the middle of the chamber, where it reached 7.14 m. below our datum. Two flaring bowls were found in the upper part of the fill. On the floor lay twenty-nine pots, scattered about singly and in groups, and for the most part badly shattered, only a few of which have yet been put together. Nine are jugs of several different kinds, large and small, one of which looks like an imported Early Helladic piece; eight are storage jars (Fig. 8, p. 556), some of considerable size, one being especially notable for its triglyph-like lugs; furthermore, there are two coarse basins, two lids, a feeding bottle, a small flaring bowl, a bowl with incurving rim, a "*depas amphikypellon*," a fine large tankard in red-wash ware, and a two-handled cup or mug.

In the burnt layer just above the floor in the eastern part of the room were found 189 small gold beads of fifteen different shapes; they lay scattered about with no trace of orderly arrangement, and some of them are so diminutive that in order to recover them all it was necessary to sift the earth and afterwards to pan it. The main types represented (Fig. 9) are barrel-shaped, cylindrical, biconoid, annular, truncated melon-shaped, and granulated rosettes, but several sub-varieties can be distinguished in most of these divisions. Along with the beads, a loop of light electron-like wire came to light. On the floor below was uncovered a row of loom-weights of unbaked clay, twenty-four large, eighteen small and some further fragments. The row extended from the east wall some 1.50 m. into the room, and at its end were two

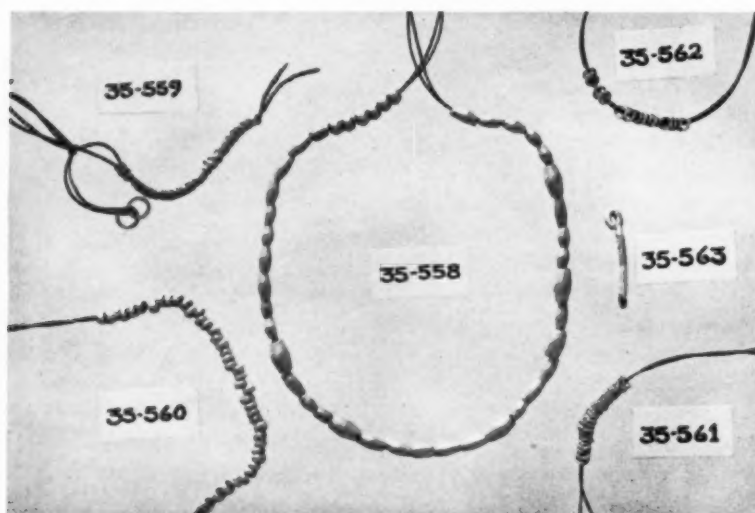


FIG. 9.—GOLD BEADS FROM ROOM 206

holes, filled with carbonized matter, which may have served for wooden posts supporting a loom. I do not think it too fanciful to see reflected in these remains the suddenness of the disaster which overwhelmed the luckless settlement; with little effort of the imagination one can picture the lady of the household, busy at her loom when summoned to flee for her life, and in her frantic haste to escape, abandoning her necklace or bracelet, which may have caught in the fabric she was weaving. Other objects unearthed in Room 206 are two bronze pins; a pin or awl of bone; a fine small celt, parts of two stone idols, three grinders and a millstone; sixteen whorls of terracotta, ten with incised decoration; and a brush handle of unbaked clay.

Room 207 lies beyond the party-wall on the east side of Room 206, having a length of 4.80 m. from north to south and a width of 2.90 m. The northeastern corner of the chamber is missing since it projected outside the limit of our "island," but elsewhere the walls are relatively well preserved with white or blackened clay plaster still adhering to their faces. The position of the door is not certain; perhaps it lay in

the missing corner in the east wall or at the north; and there may have been another entrance from the north vestibule outside Room 206. Room 207 was filled with the usual burnt *débris* ca. 1 m. deep, consisting of fallen brick, clay and pieces of roofing. The floor, marked by a thick layer of carbonized matter, is particularly uneven, varying from 6.80 m. below our datum, at the north edge of the hill, to 7.24 m. in the southern part of the chamber, and rising in a high ridge across the middle from east to west. The ridge is clearly due to a subjacent earlier wall, perhaps a piece of the fortified gateway assigned by Dörpfeld to IIa. Eighteen pots lay broken and scattered on the floor, none of which has yet been restored; seven appear to be jugs of various kinds and sizes; one is a very large storage jar; four may be classed as basins, and there are further, two flaring bowls, a crown-shaped lid, a fine bowl with incurving lid and two two-handled goblets, like Schliemann's "*depas amphikypellon*." The miscellaneous objects comprise a piece of twisted gold wire, part of a bronze pin; a serrate obsidian knife; a shiny black polisher or amulet, and two mill-stones; a bone awl; a round button and nine whorls (five bearing decoration) of terracotta.

The narrow corridor between Room 207 on the north and Rooms 205 and 208 on the south has already been mentioned. Averaging 1 m. in width, it runs eastward some 6 m. to the edge of the hill, with a dog-leg angle or jog just beyond Room 208. The fill was of the usual kind characteristic of streets, and it is clear that the passage was open to the sky. It was dug out at its western end to a depth of 6.69 m. below our zero point, and at its eastern end to the top of the gate-wall of IIa at a depth of 7.09 m. Quantities of potsherds were collected, among which there is a good deal of an unusual black "*depas amphikypellon*" decorated with incised lines.

Another unroofed area, ca. 1.50 m. wide, extended northward from the corridor, between Rooms 207 and 209. The earth filling it, which contained no *débris* of roofing and no evidence of burning, was excavated to an average depth of 6.71 m., where a mass of loose stones was everywhere encountered, perhaps a pavement, but more probably the top of the earlier wall that formed the southwestern side of the great gateway of IIa. A good many sherds were recovered in this area, yielding a complete, small, flaring bowl. A fine small celt and two bone awls might also be mentioned.

The architectural complex that has been described offers some problems that have not yet been solved. It is not clear just how these rooms are to be associated and apportioned, and whether we are dealing with one house or with a group of houses. Properly made hearths are conspicuously wanting and, although the floors are in almost all instances unmistakably marked, they lack the characteristic deposit of *débris*, composed of animal bones, shells and other rubbish, that is almost invariably found in rooms in which people lived, slept and ate their food. The unusual number of pots, including so many large storage vessels and jugs, filling all the floor-space available in these chambers also indicates that little room was left for ordinary habitation. We have consequently been led to wonder if this whole composite block of structures is not to be regarded as an appanage of the palace of the king, whose living apartments were presumably in the neighboring monumental Megaron. This humbler quarter might then provide the storerooms and magazines necessary for the

safekeeping of the provisions, supplies, utensils and other properties of the royal household.

As already remarked, the layer of habitation uncovered in 1935, with the lowest parts of its floors at ca. 7.20 m. below our datum, seems to be contemporary with the period of use of the Propylon, with its threshold at the same level, and of the great Megaron; and accepting Dörpfeld's dating of those structures, we are provisionally assigning our storerooms to the third phase of the Second City, IIc.

If this attribution is correct, it follows that the next superposed layer, with its high stone walls, its houses built about the intersection of two streets, with floors at 5.10 and 5.85 m. below our datum, must belong to Troy III. Characteristic of this stratum are the plain flaring bowls and small tankards, or mugs, lids and pots with representations of the human face, fine two-handled goblets ("depas amphikypellon") small jugs in red-wash ware and jugs with long necks ending in spouts. Imported Early Helladic ware is found throughout the period. Above the houses of this stage was an intermediate series of floor levels of habitations destroyed by fire, covered with the same kind of pottery, which also seem to appertain to Troy III.

To Troy IV we must then allocate the parallel houses, with brick and stone walls, and with floors at ca. 2.75 and 3.40 to 3.88 m. below our datum, which opened on a narrow street running approximately east and west. Characterizing this period are the red wash bowls with pebble polishing and with rounded incurving rims, also small one-handled cups. The plain flaring bowls and mugs of Troy II and III have disappeared, and the red-cross bowls of Troy V have not yet appeared. Early Helladic ware occurs also in this stage.

To Troy V must belong the houses with elaborate hearths and ovens, uncovered in our first campaign, with the principal floors at ca. 1.70 m. below our datum. Typical of this layer are the bowls with the red crosses painted on the inside or outside or both, and small tankard-like cups in red-wash ware.

The foregoing scheme involves a slight modification of that tentatively proposed in our report last year; or rather it means the definite adoption of one of the alternatives there suggested. Although it is still put forward as provisional, pending the completion of our excavations in E 6 down to the deeper layers of II and I, we feel that this arrangement is likely to hold; for in accordance with it the four periods with which we have been dealing are differentiated on the architectural side by changes in the character of their masonry and in orientation, and by the appearance or disappearance of streets; and on the ceramic side, by a slow but perceptible development and mutation, affecting both shapes and fabrics.

The excavations begun last year at the extreme western angle of the citadel in squares A 5-6 were resumed in 1935, again under the direction of Dr. Goethert, the area under examination being greatly enlarged northward into square A 4 and toward the west. The removal of an enormous amount of modern and ancient (Hellenistic) debris occupied a great deal of the time available, and work in this quarter has not yet been finished; but considerable progress was made in the investigation of four special problems.

The finished end of the Sixth City wall, which was revealed in an exploratory trench in 1934 behind a tower-like addition of later date, and which we were led to

conclude originally formed one side of a gateway, was this year completely exposed, the later structure being entirely removed. The end of the wall as it now appears is shown in Figure 10.

The ground-level, contemporary with the fortifications of Troy VI, was fairly high at this point, and only the foundations of the wall are preserved, built of limestone blocks laid with a step-like batter of the outer face. Some 0.25 m. beneath the bottom of these foundations a pavement of small stones came to light, on which still stood part of a hearth made of stones and pebbles, covered with a layer of red-burned



FIG. 10.—FINISHED END OF SIXTH CITY WALL IN SQUARE A 6

clay. A portion of an associated wall, forming a corner, made it clear that the remains are those of a house, which must antedate the Sixth City wall. The fragments of pottery found on the pavement, from which three vessels have been partly reconstructed, indicate that the house must be assigned to an early phase of Troy VI. The so-called Fifth City wall, Vc on Dörpfeld's plan, at the point where we examined it, just east of the finished end of the Sixth City wall, is only one course thick, built of medium-sized stones; it must have been a terrace wall here, rather than a city wall. The fill behind the stone facing contained pottery of Troy V.

A trench in the area northwest of the northwestern anta of Dörpfeld's great Megaron, VI B, revealed that the foundations of the latter rested on a fill some 2 m. deep, necessitated by the steep slope of the hill. The fill contained potsherds of Troy VI. Beneath it, on a terrace supported by a wall of massive blocks, hearths and house-walls, the remains of habitations of Troy V came to light. The ground drops off sharply toward the west, and under the terrace wall itself Fifth city pottery occurs.

Just west of A 5, a large shaft was carried down to native rock, through undis-

turbed prehistoric deposit, although the early layers immediately round about it had been displaced by a fill of Hellenistic date. Hard-pan was found at 4.20 m. below our zero point, the latter being taken on the wall of a house which could be assigned to Troy VI on the evidence of the pottery found in it. At a depth of 1 m., red wash ware begins to appear more commonly, but gray Minyan continues, though in diminished quantities, into the deepest strata. Some good sherds of imported Late Helladic (Fig. 11), found at a depth of 2 m., are useful for dating the layers.

A continuation of the Sixth City wall beyond the presumable gateway has not yet been found. In the northwestern part of the area, however, part of the Hellenistic wall, dated by the pottery recovered, leading up from the lower town to the Acropolis, was brought to light. It is built with an inner and an outer face of squared limestone blocks, the space between being filled with rough stone. The fitting and jointing of the inner face are admirably done. The western extent of the wall has not yet been cleared; the eastern part ascends the slope toward the edge of the citadel, and it seems to end approximately at the place where the continuation of the Sixth City wall might be expected. It has not yet been possible to determine what happened at this point, and we hope that further excavation next season may shed light on the problem.

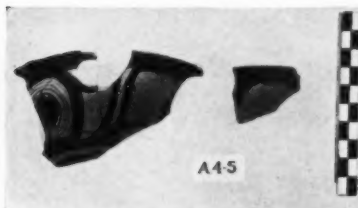


FIG. 11.—SHERDS OF IMPORTED MYCENAEAN WARE (L.H. I)

A new area of excavation was initiated during the past campaign in squares A 7-8 on the southwesterly side of the Acropolis. Our object was to clear a broad space up to the Sixth City wall, and to examine more particularly the ground outside

the gateway, VI U on the plan, which Professor Dörpfeld recognized as a gate, although it had been closed by a later wall against which a semicircular bastion was apparently erected in the period of Troy VII or VIII. Our intention is to continue investigations in this region next year and to dig down on the inner side of the gate as well, in order to determine, if possible, how far southward the great paved ramp of Troy II extended. The work in this sector was conducted by Miss Dorothy Rawson who was relieved during the concluding week by Professor Semple. With the use of track and cars, a great mass of earth, more than 1700 cubic meters, was removed, for the most part dump from earlier excavations and a layer of Roman-Hellenistic debris; and a wide trench was opened from southwest toward northeast. Our hope of laying bare a considerable section of the façade of the Sixth City wall was, however, rudely frustrated; for hardly more than 2 m. in front of the latter, and approximately parallel to it, a massive Hellenistic wall came to light, still standing to a height of ten courses. It was constructed with an outer facing of well squared blocks of hard limestone cut with deeply drafted edges, the blocks averaging ca. 0.35 m. in height and 0.95 m. in length, a core of rubble and rough stone, and a rear face of soft limestone blocks, which were not intended to be visible. The wall runs almost all the way across our trench from southeast to northwest, then turns at a right angle toward the southwest, but its continuation in this direction seems to have been broken away in ancient times, and only a few stones of the lowest courses are left in

place. Just beyond this return, however, toward the north, we encountered another wall of regular limestone blocks, with a more westerly orientation, the further extent of which has not yet been explored. Founded at a higher level, it seems to be later in date than the first wall, but it may still belong to the Hellenistic period. Further digging is necessary to determine the character and the purpose of these structures. A few meters southwestward of the corner just mentioned a substantial basis was uncovered, ca. 4.225 m. square, measured on the euthynteria. The foundations are of rough stone and *poros*, the superstructure of marble. Only two courses of the latter are preserved, a broad, step-like euthynteria, and the lowest course of the podium itself, with a well cut moulding at its bottom edge. The marble blocks on the northwestern side of the basis have at some time been dismantled. We have as yet found no clue to suggest what kind of monument was supported on the basis. The structure is built with reference to a ground-level which corresponds better with that of the second wall than with that of the first described above. Perhaps the earlier wall, running southwestward from the corner, was demolished to make room for the podium. The technique and workmanship of the podium, however, hardly permit it to be assigned to a date later than the Hellenistic period.

In the broad trench through squares F 8-9, first laid out in 1932, operations were resumed, as usual, during our fourth season of digging. The upper part of the area, in F 8, north of our Wall K, was placed in the charge of Miss Taft, who had four trained workmen under her command. At the level of almost 3 m. below our datum, which had previously been reached, we had already passed below the Sixth stratum and into a characteristic brown layer, composed of dissolved brick, definitely assignable to Troy V, in which, at ca. 2.60 m., a floor associated with house-walls had given us one stage of habitation. In the campaign just concluded this section was further excavated to a depth of 4.20 m. below our zero point, and three additional habitation-levels came to light at 3.20-3.30 m., 3.40-3.90 m., and at 4.20 m. The two uppermost of these certainly belong to Troy V, representing consecutive phases in the occupation of a small house, the plan of which could in part be recognized; and the floor at 4.20 m. should doubtless be attributed to a still earlier stage of the same period. In its two later phases the house comprised at least two rooms, a living-room on the north, and on the south a smaller chamber, perhaps a workroom or a magazine, although it yielded little to indicate its use in any period. The living-room is 4.10 m. wide from east to west, and it had a length of more than 7 m. (the north end was cut off by Schliemann's excavations). The walls, of stone on the east, of crude bricks on stone foundations on the west and south, were coated with clay plaster, still relatively well preserved. A communicating door led into the southern room, but the position of the main entrance to the house was not apparent; perhaps it lay in the missing north portion. All the floors had a considerable downward slope from north to south.

To the upper layer at 3.20-3.30 m. belonged three successive hearths in the eastern part of the large room, all constructed of stones and sherds overlaid with hard-burnt clay. Just to the south was a small stand, perhaps for cooking pots, made of bricks plastered with clay. The southwestern corner of the room was occupied by a large platform, possibly a seat, a quarter circle in plan, with a radius of ca. 0.90 m., built

up against the angle to a height of 0.50 m. Its outer face was constructed of large bricks faced with plaster, while the core was of rubble. Miscellaneous objects recovered in the room comprised a bronze pin, a bone awl, a shell bead, and six whorls of terracotta; and the potsherds included relatively numerous fragments of red-cross bowls.

The corner "seat" (Fig. 12) had first been built in the earlier period of the house, represented by the floors in the layer 3.40-3.90 m. At this time the seat was rectangular in plan instead of rounded, projecting ca. 0.80 m., with a height of 0.40 m. to 0.50 m. Its front was made of stones, coated at least twice with clay plaster, and the latter continued across the whole top over the rubble filling. A large, raised hearth-



FIG. 12.—CORNER SEAT, SHOWING TWO PERIODS OF CONSTRUCTION

circle belonging to this earlier period was found in well preserved state in the eastern part of the room (Fig. 13). On it stood two clay-plastered brick stands, on which pots could be set, and a small oven, or fire-box, complete. The latter, also coated with plaster, consisted of a thick ring of clay, ca. 0.60 m. in diameter and 0.18 m. high; it had an opening toward the west for stoking, and it had clearly been designed to support a cooking vessel over a fire. The sherds from the floors, among which were a few scanty fragments of red-cross bowls, allowed the restoration of one coarse pot. The only other objects were a pinhead and four awls of bone, and two whorls of terracotta, one of which bears an interesting incised decoration. Amid the debris of fallen bricks above the floor were found the crumbling bones of a skeleton, apparently human, perhaps that of a small child. It hardly seemed to be a proper burial, and the presence of the bones in this place has not yet been satisfactorily explained. On the floor of the southern room were recovered two grinders, three millstones, a bone awl, a whorl of terracotta, and fragments of a bronze bracelet.

In the early period of habitation, with its floor at 4.20 m., the dividing wall between the north and south rooms had not yet been built. Two successive hearths were uncovered, one of them circular in shape, with a raised rim of clay. Two rows of stones, set close to the hearth, may have formed a platform, or stand. The pottery found in this layer is similar to that from the stratum at 3.40–3.90 m., except that there are no fragments of red-cross bowls. One bone awl, a shell bead, two gray incised whorls, and part of a quadruped of terracotta were also recovered. The investigation of this layer has not yet been completed.

Outside the eastern wall of the house, at ca. 3 m. below our datum, was found a large urn, cracked but still retaining its shape, which had probably once been cov-



FIG. 13.—HEARTH CIRCLE WITH OVEN AND TWO POT-STANDS

ered by a fragment of a pithos that lay beside it. The urn contained the decomposed bones of the skeleton of a child probably less than two years old, and it was filled with soft blackened earth, shells, etc. There were also four potsherds inside it, one of which can be definitely dated to Troy V. The urn itself (Fig. 14), with an upper diameter of 0.35 m., is a deep, handleless vessel of coarse ware, with a flat splaying rim which bears an incised decoration.

Work in the middle and southern sections of Trench F 8–9 was superintended by Mr. Caskey, who had had charge of this area in the two preceding campaigns. In the middle section the space available for deeper digging had been greatly restricted by the complex of walls mentioned in our report for 1934. Beginning at 5 m. below our datum, the lowest point reached last year, Mr. Caskey was nevertheless able to continue our stratigraphic examination to a further depth of 2.40 m., removing the deposit in arbitrary layers of ten to twenty centimeters, and keeping the pottery from each layer in separate containers. The trench was finally reduced to little more than a narrow pit, and at 7.40 m. below our zero a solid mass of stones effectually stopped

further progress. A study of the ceramic material recovered indicates that at this depth we have not yet penetrated to a Fifth City layer; the pottery still belongs to VI, although clearly representing the early phases of that period. In these deeper strata imported Mycenaean pottery no longer occurs, but at 5.90 m. was found a sherd of Mat painted ware of yellowish buff fabric, decorated with a spiral in dark brown (Fig. 15). The majority of the fragments are of coarse or gray wares, but increasing quantities of red ware make their appearance as we go deeper, although they are still distinguishable from the characteristic red ware of Troy V. The discoveries in this section thus confirm the view that Troy VI was a period of long duration, and that its beginning goes back beyond the middle of the second millennium.

Dr. Dörpfeld's keen and understanding observation contributed not a little toward the elucidation of some of the puzzling architectural remains uncovered in



FIG. 14.—BURIAL URN
FROM F 8



FIG. 15.—SHERD OF MAT
PAINTED WARE

this trench last year. Following his suggestion, we thus see in two massive walls, "K" on the north and 505 on the south, the two sides of a great house, or megaron, of Troy VI, similar to other contemporary terraced houses, such as VI E and VI F. If this view is correct, the southern wall, with its existing top at 4.60 m., must be merely a foundation; for the floor of the house must have lain much higher at ca. 3.50 m. below our datum. Some remains of this floor are visible in the eastern edge of the trench, and a pier-like foundation of large stones may have supported a column in the axis of the building. Farther eastward in the same line the top of a great pyramidal pillar has now been revealed, and the continuation of digging on this side may bring to light next year a better preserved part of the house.

Extending our excavation eastward from Trench F 8-9 along the Sixth City circuit wall, we soon laid bare the eastern part of the rectangular platform of late Roman or Byzantine date, constructed of reused architectural blocks of marble laid with rubble in cement, the western portion of which had been uncovered in 1933. Among the many and varied pièces removed, only one further inscribed block was brought to light, namely a Doric architrave bearing seven letters of a Greek inscription. A few meters farther eastward two short fragments of Roman walls were en-

countered, one being a curved piece, the line of which coincides with the arc of the outer wall of Dörpfeld's Theatre C, as restored by him. Not a single further trace of the theatre has yet been observed, and, if it ever really did exist, the whole upper part of the building must have been completely destroyed in antiquity.

A narrow strip of undisturbed prehistoric deposit lying between the platform and the Roman walls yielded some sherds of *Buckelkeramik*, which, in association with remnants of house-walls, indicated that we were dealing with a habitation-layer of VIIb. At a much deeper level, with its floor at 5.50 m. below our datum, part of a house of VIIa was excavated, just along the inner face of the Sixth City wall, which had been made to serve as one side of the building. The house had been destroyed by fire and was filled with ashes, blackened earth, carbonized wood, and reddened, partly calcined stones. A large pithos with a stone lid, set below the floor, in the southwestern corner, had already been noted in 1933. Though the eastern end of the house has not yet been found, much characteristic ceramic material of VIIa has already been recovered.

The work just mentioned was made possible by the removal of the deep layer of Schliemann's dump and an underlying disturbed stratum that covered the southern slope of the Acropolis between Trench F 8-9 and the South Gate. This large undertaking was superintended by Professor Semple, who with track and cars and a force of men ranging from sixteen to twenty-four in number, succeeded in the course of a month in carrying away some 2500 cubic meters of earth. The rubbish from previous excavations, varying from 1 to 3 m. in depth, contained little of interest, but many large stones which impeded our labor. Below it we came everywhere upon a deposit more than a meter deep, composed of mixed Hellenistic and Roman debris which had evidently been thoroughly ransacked. Indeed the ruinous state of the architectural material led us to conclude that this side of the citadel had in late Roman or Byzantine times been subjected to a barbarous and wanton destruction. The whole west wall of Theatre B—probably a Bouleuterion—had been demolished to its foundations, the colonnades higher up toward the north had similarly been razed, and the great majority of the marble blocks from these structures had been shattered into countless fragments and splinters. One might surmise that lime-burners had been at work, were it not for the fact that all the broken pieces of marble still lay where they had been mutilated. In addition to eight fragments of inscriptions, not a few bronze coins came to light amid the wreckage; but it has not yet been possible to determine more exactly the date of the disaster. By the beginning of June the entire area between the Bouleuterion on the east and our Trench F 8-9 on the west had been stripped of the later deposit down to the top of the pre-classical layers, and this whole space is now available for easy excavation. Already walls of VIIb, VIIa, and VI can be distinguished, and there is a good chance that something of importance has survived in this quarter. The top of a well jointed pyramidal pillar and its possible relation to a large house of Troy VI have already been mentioned.

In the eastern part of this newly opened area, excavations were conducted inside the South Gate of Troy VI, under the direction of Mrs. Semple, who in 1933 had cleared the approach to the entrance. As will be recalled, two periods in the history of the street had been previously distinguished, each marked by a substantial stone

pavement, the lower of which was further provided with a well built subterranean drain. Since the latter is constructed mainly of carefully finished blocks, apparently taken from the Sixth City wall, it was suggested that the lower street in its present form dated from VIIa, although presumably occupying the same level as its predecessor of the Sixth City. This conjecture has not yet with certainty been substantiated or disproved.

Proceeding inward from the gateway, Mrs. Semple first found a small area of cobblestones still in place at a high level, representing a third and later stage in the use of the road—perhaps assignable to Troy VIII or even to Hellenistic times. When these remains had been removed, the upper of the two pavements was exposed and



FIG. 16.—HOUSE 700 FROM THE NORTH

followed some 5.50 m. until it stopped and was succeeded by an ordinary roadway of packed earth and stones. At this point a narrower branch street appears to take off at right angles toward the west, while the main road continues northward between house-walls, curving slightly toward the left and evidently leading to the center of the citadel. Its course was traced until we reached the foundations of the Roman Propylaion and the edge of Schliemann's great East Trench, beyond which all remains have naturally disappeared. Throughout its extent, marked by the usual deposit of stones, potsherds and rubbish, the street ascends at a fairly sharp gradient. So far as we can tell, it follows the line of the earlier roadway with its pavement and drain at a lower level; but we have not yet been able to differentiate the two periods in the northern section. On the western side of the street is a wall built of huge blocks of stone in a Cyclopean style, no doubt of Sixth City date, although the building has not yet been cleared.

Immediately inside the gate, to the right of the road, lay a house, definitely data-

ble to VIIa, its floor-level corresponding with the lower rather than with the upper paved street. This building (Fig. 16) we have called House 700. The eastern part of it was destroyed when the Roman Bouleuterion was erected, and the southern end was demolished at the same time to make way for what appears to have been a portico attached to the Bouleuterion. All that now remains of House 700 is the doorway opening from the street, a small vestibule, and part of one room. The latter must have been the kitchen or living-room of the establishment, for it contained a hearth, and, immediately adjacent, a quern lying in a trough-like basin of hardened brick and clay, built against the southern wall of crude brick. A small grinder lay just below. The trough had evidently emptied into a second, similar basin at a lower level in which were found a good many grains of what seems to be carbonized wheat. Beside the central hearth lay fragments of a large pithos. Against the western wall was a rectangular construction of crude bricks, filled with ashes and burnt matter, perhaps an oven. The house had clearly been destroyed in a conflagration of great intensity, for the floor in the room as well as in the vestibule was covered with ashes, charred matter, blackened stones, and fragments of bricks and clay baked hard; and the inner face of the wall was badly cracked and calcined. A considerable quantity of shattered pottery was recovered, from which it has been possible to put together five vases, namely two bowls, a water jug with one handle, a large handleless crater, and a somewhat similar vessel with two handles. In the doorway leading from the vestibule to the street were found the fragments of a huge hydria, now complete except for its two handles. All this pottery is of the typical yellow or buff ware, characteristic of VIIa; and though many of the fragments have been damaged and blackened by fire, some of the pots are still handsome pieces. Other objects found in the house comprise some fragments of bronze pins; a knife-handle, three awls and a piece of inlay of bone; a serrate blade of flint; and four whorls of terracotta. The northern part of House 700 had been particularly badly ruined and together with the adjacent street was encumbered with masses of fallen stones and other debris. Amid this wreckage were retrieved two fragments of a human skull and one or two other bones, possibly from a skeleton, presumably the remains of a human victim of the catastrophe that overwhelmed the house.

In a much disturbed area to the north of House 700, Mrs. Semple found an ornament of gold, in the form of a very delicately worked coiled serpent, which perhaps once served as an ear-ring (Fig. 17). Deeper excavation in this place revealed the shaft of a large rectangular well, 2.60 m. long from east to west and 1.60 m. wide (Fig. 18). The stone walls lining it were substantially built of squared blocks, some small and some large, laid in horizontal, but not perfectly regular courses; but the



FIG. 17.—GOLD ORNAMENT IN THE FORM OF A COILED SERPENT

pressure of the earth behind has caused them to buckle inward on all four sides. The north wall had been demolished to a considerable depth and that on the east had also suffered severely; the western facing is somewhat better preserved, and that on the south is almost intact. Deep, horizontal grooves, presumably for wooden beams, have been observed in the east, north and west walls. If it was ever carried down to



FIG. 18.—STONE-LINED SHAFT OF WELL
FROM THE WEST

find water, the well must be a very deep one; how deep we cannot yet tell, as our digging this season stopped at a point 3.90 m. below the top of the south wall. The debris removed from the shaft contained great quantities of potsherds, almost wholly of Hellenistic date, although earlier Trojan fabrics are represented. The well thus appears to have been filled in the third or second century B.C. Whether its original construction is to be assigned to a somewhat earlier phase of the same period or to more remote pre-classical times can only be determined after further excavation.

Beyond the well, toward the north, were uncovered the walls of a two-roomed house, extending eastward and abutting against the west wall of the Bouleuterion. Some bronze coins found here indicate that the structure is probably of late Roman date, but its character could not be determined. When its foundations were laid, an earlier building beneath it (probably of VIIa) was partly destroyed.

On the western side of the roadway, just inside the great gate, Mrs. Semple discovered the remains of a long narrow house (House 701), in the space between the Sixth City wall and the branch street leading westward. The inner face of the Sixth City wall behind Tower VI i leans sharply northward, its upper courses having apparently been thrust out of place by an earthquake. Nevertheless it was utilized to form the south side of House 701, which perhaps also communicated through a door with the room in the interior of the tower. The west end of the house has not yet been excavated, and neither the internal arrangement nor the position of the entrance has been determined. A well marked floor-level, covered with debris from burning, has, however, provided evidence to date the last use of the building; for it yielded great numbers of potsherds among which many fragments of *Buckelkeramik*

are conspicuous. Some 0.60 m. deeper another floor was laid bare, this, too, bearing unmistakable traces of a conflagration: this is the floor, a small corner of which was examined in 1933, just north of Tower VI i, when the greater part of a large hydria in typical VIIa ware was recovered. Our hope of finding a large floor-deposit with many further vases of this period was disappointed, although we did obtain a mass of sherds, including some particularly beautiful pieces. In the northern and western parts of the area some walls came to light which seem to be associated with the floor, but the extent and the plan of the house of VIIa are still unknown.

On the eastern side of the paved street, immediately outside Gate VI T, a low pillar, built of carefully cut blocks of stone in the style of the Sixth City, had long ago been observed. As now preserved, it looks like a small truncated pyramid, similar to that mentioned on page 568. In 1933 Mrs. Semple investigated the area behind it and uncovered part of a stone wall apparently running from the pillar in an easterly direction. We concluded that the monument was probably an anta, forming one side of the façade of a building of some importance that had faced the roadway in this conspicuous position. In the recent campaign, explorations were resumed by Mrs. Semple in the hope of gaining further light on the structure in question. Unfortunately the whole region has been so much disturbed by constructions and reconstructions in several successive periods of Graeco-Roman times that the elucidation of the earlier remains is beset with great difficulty. No trace of a corresponding southern anta could be found; but at a distance of ca. 4 m. from the presumable north wall of the building a roughly parallel wall of similar technique came to light. The western part of the space between these two walls, almost completely occupied by later remains, offers little opportunity for probing; and diagonally across the middle runs a massive foundation belonging to the Bouleuterion. Farther eastward, however, on the northerly side of the Roman foundation, a small undisturbed area was discovered, and here we were able to dig down to native rock which was reached at a depth of 3.20 m. below the present top of the Roman foundation. The prehistoric deposit here consists of layer upon layer of burned and carbonized debris, containing enormous quantities of animal bones, relatively few potsherds and almost no other objects. The sherds from the upper meter, assignable to VIIa, include some imported Mycenaean pieces (Late Helladic III); in the second meter, gray ware of Troy VI predominates; and in the lowest meter, red ware of V begins to make its appearance. The successive layers of burning seem not to be due to a conflagration, but rather to numerous small fires repeated at intervals over a long period of time; and the series of floors can hardly be interpreted as ordinary habitation-levels, which, on the evidence of contemporary analogies at Troy, would have yielded much more pottery and other rubbish. We are consequently inclined to recognize in this area, just outside the main gate of the citadel, a formal place of offering, where animal victims were sacrificed from time to time. Perhaps it is a sanctuary, in some way connected with the monumental stone pillars set up against the neighboring tower. The eastern end of the building, if it was a covered building, has not yet been cleared; and we propose to continue our researches here next season.

An extension of our operations in this region both toward the east and the south has now been greatly facilitated, for during the months of May and June the high

mounds of *débris*, mainly from Schliemann's and Dörpfeld's excavations, which covered the ground to the south and east of the Bouleuterion, were completely removed. In the course of this work 2773 carloads of earth and stone were transported to the southwestern slope well below the Acropolis. Except on the eastern side, where we penetrated into a layer, disturbed in ancient times, that contained a number of column drums, capitals and other architectural pieces of Roman date, this undertaking, as we had anticipated, yielded little or nothing of interest; we carried it out in order to render the southern part of the citadel more easily accessible to visitors and to permit a more comprehensive view of the wall and the gate of Troy VI.

The investigation of House VI G, begun last year, was continued in 1935 under the supervision of Mrs. Blegen, who was assisted by Mrs. Hill. The northern end and the north central part of the house had previously been examined: an overlying layer, identified by characteristic pottery, had been recognized and assigned to VIIb; and at a depth of ca. 2 m. below our datum another floor, marked by the charred *débris* of a conflagration, was found to belong to VIIa. Eight pithoi sunk beneath this floor and apparently for the most part contemporary with it, had been noted, and it was observed that they must represent two periods of use. During the past season, the accumulation still remaining in the middle section of the house was removed in a search for additional evidence to help explain and date the building.

The late habitation-level, already recorded in the eastern quarter, was found to be represented likewise in a small undisturbed area toward the west. A short stretch of wall here preserved, with a number of small orthostates still in position, in the unmistakable style of VIIb, conveniently established the date of the occupation. Almost nothing was left of the room that had once lain to the south of the wall, but its thick floor-deposit, from 1 to 1.30 m. below our datum, gave abundant indication that the house had been destroyed by fire. A polisher of green stone and two whorls of terracotta were recovered here, also a quantity of potsherds, including a good many examples of *Buckelkeramik*, some plain, and some with characteristic fluting, together with a small knobbed cup, lacking only its handle and part of the adjoining side.

Some further traces of the floor at a depth of 2 to 2.10 m. below our zero also came to light. It was covered with layers of burnt *débris*, chiefly the remains of bricks and clay, and with it was apparently associated the upper, reconstructed part of the east wall of House VI G. When the latter was rebuilt, it was made considerably narrower than the lower portion and set back so as to leave an irregular "shelf" along its inner face, corresponding roughly with the level of the floor. On this shelf we found a rather orderly heap of animal bones of large size, possibly those of an ox: it looked as if a side of beef had been placed here before the fire. The pottery in this layer was typical of VIIa, and it included some fragments of imported Mycenaean ware (Late Helladic III).

Remains of yet another floor appeared here and there at ca. 2.50 to 2.60 m. below our datum; it was not continuous, since it had evidently been much disturbed when the numerous pithoi contemporary with the upper floor were set in place. It was most clearly distinguished near the western wall of House VI G, where it yielded some excellent pottery of VIIa, together with a faceted carnelian bead, splinters of

an ivory box, two rosettes (Fig. 19) and part of a third of the same material, some pieces of boars' tusks, and many fragments of the shell of an ostrich egg.

Beneath this floor for more than a meter, to ca. 3.80 m. below our zero, the deposit showed no clearly defined lines of stratification, and the objects that emerged were rather mixed in character. The potsherds thus included many pieces which we had no hesitation in attributing to VIIa, but there were numerous other fragments that we could with almost equal certainty assign to VI. Some Mycenaean sherds (Late Helladic III), discolored by fire, came to light at 3.30 m., and at 3.45 m. we found part of an alabastron of Late Helladic III together with the upper half of a gray Minyan jug with trefoil lip. A well preserved bronze arrow-head came from the same layer. The intermixture noted in this deposit is almost certainly due to disturbance in connection with the setting of the pithoi that have already been mentioned, for most of these large storage jars were fixed in the ground with their bot-



FIG. 19.—FRAGMENTS OF BOX AND TWO ROSETTES OF IVORY

toms at approximately 3.80 m. below our datum, and their tops presumably at the level of the floor at ca. 2 m. In addition to the eight reported last year, eleven pithoi were discovered in 1935; and this total of nineteen must have occupied a very considerable part of the floor-space available in House VI G. As previously stated, the jars are not all of exactly the same date: Nos. 12, 14, 15, 16, 21 and perhaps one or two others evidently belong to an earlier period of installation (perhaps in association with the floor at 2.50 to 2.60 m.), for they were broken and put out of use when their neighbors were set in place. These in turn were subsequently damaged and covered with debris, and not one was found still preserved to its full height. Several of these jars when excavated yielded objects of interest, but it was not possible to determine whether the latter had been placed there originally or had later accidentally fallen into the pithoi. Accident seemed surely precluded in the state of No. 12, in which the skeletons of a goat and a kid were found packed into the lower part of the jar along with many potsherds from which we were able to put together the complete upper half of a large stirrup vase in gray Minyan ware (Fig. 20). The vessel had for some reason been bisected horizontally by a neat, even cut through the middle of the body, and no trace of the lower portion came to light. Other sherds from this pithos included the neck of a gray jug and the base of a crater-like pot in

red ware; and there were also two loom-weights. Nos. 15 and 16 contained among other sherds the greater part of a handsome, imported red cylix in Mycenaean ware (Late Helladic III) and much of a sharply angular, dark-gray Minyan stemmed goblet with a round loop handle, both ends of which rise from the rim on one side, and an ordinary vertical handle opposite it on the other. Sherds of both vases were found scattered in both pithoi, which thus apparently must have been broken and filled with rubbish at the same time. Pithos No. 11, which had been set at a much higher level and is perhaps to be dated to VIIb, still held considerable remains of carbonized vetch. The western row of pithoi, Nos. 6, 8, 10, 11, 13 and 17, had not been founded so deeply as the others, since the underlying wall, Ve, had impeded digging.



FIG. 20.—UPPER HALF OF STIRRUP VASE
IN GRAY MINYAN WARE

The west wall of House VI G rested on earth at ca. 3.80 m. below our datum, and the east wall stopped at approximately the same level. The transverse wall, marked on Dörpfeld's plan, originally ran all the way across between the two, but its eastern end was demolished and removed at an early period, perhaps before the floor at 2 m. was made. The construction of the walls, particularly in the frequent use of relatively small flat stones, differs somewhat in style from the masonry of VI, and although we have nowhere in the building observed Dörpfeld's characteristic architectural feature of VIIa, namely the re-employment of cut blocks taken from the Sixth

City wall, it seems clear from the ceramic evidence that House VI G is to be dated to the initial phase of the Seventh City.

In a small area near the edge of Schliemann's great East Trench it was possible to examine carefully the deeper strata of the deposit, and digging down in a series of arbitrary layers of 10 cm. each, we secured a useful sequence of potsherds. From just under the bottoms of the pithoi, at 3.80 m. below our datum, to a depth of 6.20 m., the lowest point reached, the accumulation, though marked by several successive layers of ashes and possible ground-levels, seemed to be unmixed and consistent in character, definitely referable to the Sixth City. Among the fragments of pottery gray Minyan ware predominated throughout; in the deepest strata it frequently bore a metallic-looking, grayish lustre and was often less refined, and it was also accompanied by more heavy red ware than in the upper layers. The lowest part of this deposit passed underneath wall Ve, and the latter can accordingly now be dated to Troy VI. The function of this wall is not yet clear, but it may have formed one side of a house that lay farther toward the west.

The past season saw the completion, under the supervision of Mr. Caskey, of our excavation of House VI F, which had been commenced in 1934. Last year we removed most of the later accumulation covering the southern and western quarters of the

building, and by means of some supplementary trenching we ascertained that two rows of stone bases still stood on the well preserved floor. The whole of the floor has now been laid bare, and House VI F has emerged as the most notable surviving edifice of the Sixth City (Fig. 21). With inner dimensions of approximately 8.50 m. by 11.70 m., it retains its northern, western and southern walls still standing to a maximum height of 2.40 m.; a doorway appears in the western wall, and a second, later walled shut, may be recognized on the south; twelve stone bases indicate that a like number of wooden pillars supported an upper floor and the roof, and a stone step apparently fixes the position of a stairway leading to the second story.

The superincumbent débris, which was dug away layer by layer and yielded



FIG. 21.—HOUSE VI F FROM THE SOUTH

much stratified material of VIIb, VIIa and a final phase of VI, to add to that recovered previously, need not detain us here, but the house itself merits some further description. The hard floor of brownish clay is very irregular, and has a considerable downward slope from west to east. It was overlaid by a deposit of fine gray ash and carbonized matter, quite different from the blackened, flame-marked rubbish and calcined wreckage of the fallen superstructure that we regularly see in buildings that have perished in a great fire, such as House 700. The absence of similar tell-tale indications on the floor, on the walls and in the fill manifestly shows that House VI F was not destroyed in a conflagration. Here and there on the floor were roughly circular, blackened areas, 1 m. or more in diameter, which perhaps had served as hearths; several of them had apparently been marked out by surrounding rings of stakes set in small holes, but the latter gave no definite clue to the purpose of such a border. In the southwest corner of the house was a shallow pit, lined with flat stones, at the bottom of which a coarse jar had been set in the ground; the pit,

completely filled with ashes and potsherds, is possibly to be recognized as the hearth, where the cooking of the establishment was done.

The column bases which give such a monumental character to this house were set parallel to the long axis of the building in two rows, ca. 4.50 m. apart, measured from center to center, and about 2 m. from the inner faces of the lateral walls, five bases in each row. The northernmost in the western line, which had been displaced and was found lying on its side, was put back into its original position, clearly indicated by a depression in the floor. The bases are not of uniform size, and their alignment and spacing are far from exact. The middle base in each row is roughly oblong in shape, laid so that its top is flush with the floor, while the others, to north and south, projecting well above the pavement, have been hewn into cylindrical form. A second pair of oblong bases came to light between the two rows, one lying to the north and one to the south of the center of the building; each is a large flat slab of stone, set parallel to the transverse axis of the room, with its upper surface some 0.30 m. below the level of the floor. We thus have a total of twelve stone bases in House VI F; and there can be no doubt that they once supported wooden columns on which the upper structure rested. Some of the bases, notably in the eastern row, bear circular marks of weathering, or of rough tooling, indicating that the columns were ca. 0.30 m. thick. In the accumulation directly overlying the southernmost oblong slab, moreover, a hole, some 0.30 m. in diameter, was clearly traceable, on account of its filling of very soft earth, from a height of more than 1 m. above the stone. Part of a wooden post had evidently remained standing here after the destruction of the house, and had gradually decayed when the *débris* had become firmly settled about it.

The extraordinary number and the massive character of the column bases must surely mean that the columns supported much more than an ordinary flat roof. Taking into consideration the irregularities of the floor, quite out of keeping in the main apartments of a house so pretentious as this; the immense thickness of the east foundation, evidently designed to sustain a wall of great height; and the relation of the western door to the stratum of Troy V outside it, which, as pointed out before, shows that this entrance could only have given comfortable access at a level more than 2 m. higher than the inside floor; and taking other bits of evidence into account, we can hardly avoid the conclusion that the part of the house we have uncovered was a basement and that the principal living-rooms were in an upper story. The thick layer of *débris* from habitation, including vast quantities of animal bones, which we found almost everywhere at ca. 0.30 to 0.40 m. above the clay pavement, but itself showing no clear floor-line, might then be the rubbish sunk down from the floor of the upper story when the house fell into ruins. So far as we can tell from a preliminary examination, the ceramic remains from this layer, comprising many fragments of imported Late Helladic ware, differ little, if at all, from those found on the floor below. Among the other objects presumably carried down in the collapse may be mentioned a carved sword-pommel in alabaster, a flint blade, and five whorls of terracotta.

We are not ready at this time to offer a reconstruction of the upper story, the details of which can be determined, if at all, only by a painstaking study of the inter-

nal evidence. It is not yet clear how the upper floor was divided into rooms nor how many of the columns were continued up to the roof, although we can be reasonably certain that the latter was of the usual flat type. The cluster of four oblong bases, symmetrically grouped about the middle point of the house, may well have been for piers supporting a central hearth in the upper room, perhaps with a clerestory, or a cupola of some sort, above it. Many problems will have to be solved, however, before a final interpretation can be presented. Thus the difference in level between the bases just mentioned, one pair set flush with the floor, the other some 0.30 m.



FIG. 22.—CYLINDRICAL STAND, PERHAPS FOR A LAMP, IN GRAY MINYAN WARE



FIG. 23.—UPPER PART OF A STIRRUP VASE, A TROJAN IMITATION OF MYCENAEAN WARE

deeper, is still to be explained; and it is possible that two periods of occupation may have to be distinguished.

No evidence of partition walls was observed in the basement, but the latter could have been divided into rooms almost at will, if desired, by stretching hangings or wickerwork from column to column. The stairway to the upper floor, as noted last year, must have been erected against the south wall, just to the east of the doorway. Horizontal grooves for thick wooden beams may still be seen in the north, west and south walls; and the first named had similar timbers built into its exterior face. A small rectangular opening through the north wall, just above the level of the floor, probably served for drainage. The floor-deposit found in the basement included a great deal of pottery, for the most part broken into small fragments and widely scattered. Considerable portions of at least sixteen different pots have been distinguished, and we hope that most of them can be put together when we have time

to work through the material thoroughly. Jars, bowls, goblets and jugs in gray ware are well represented; furthermore we may note a huge cylindrical stem in the same fabric, perhaps a lamp-stand (Fig. 22); a flattened spherical flask of remarkable shape; fragments of three capacious stirrup vases, made and decorated locally in an imitation of the Mycenaean style (Fig. 23); and a good many pieces of imported vases in real Mycenaean ware. Other objects worth mentioning are seven fragments



FIG. 24.—CYLINDRICAL
IVORY SEAL FROM
HOUSE VI F

of bronze nails and pins, three knife-blades of flint, a hammer-head in green stone, two beads of glass paste, nineteen whorls of terracotta, and a well preserved cylindrical ivory seal, terminating in a suspension-hole at its upper end (Fig. 24).

House VI E, lying on a continuation of the same terrace immediately to the north of VI F, and supported by a magnificent retaining wall, was likewise subjected to examination during the past season. A small mound of late rubbish covering the middle of the building was removed, and two transverse trenches were dug through the fill enclosed within the foundations. It is clear, as pointed out long ago by Dörpfeld, that the floor of the house must have lain at a relatively high level, probably in correspondence with a narrow horizontal ledge, due to an offset, in the west wall. Unfortunately no remains of the floor appear to have escaped destruction in ancient times, and nothing further can now be determined regarding the interior arrangement of the building. No column bases and no foundations for bases have been left *in situ*. The fill on which the floor was laid is a purely artificial one, composed of gravel-like waste, masons' chips and fragments of stone, obviously the débris accumulated during the construction of the walls when the well cut blocks were being dressed. This material has been heaped up on the sloping hillside to a depth varying from 1.50 m. to more than 3 m. in order to make a level bed for the floor. It contained almost no potsherds or other objects; but on the earlier ground-level below it lay a few fragments of gray Minyan ware, and some good pieces of Mycenaean vases assignable to the beginning of Late Helladic III or even to Late Helladic II. Below this point we came at once into an undisturbed habitation-layer, dated by its pottery to Troy V, in which period this end of the Acropolis evidently fell off in a sharp slope toward the east. The great terrace raised up in the time of the Sixth City thus required sturdy support, and the eastern substructures of Houses VI E and VI F were built accordingly massive. The foundations of the west wall of VI E were carried down some 2.25 m. below the "shelf" that presumably indicates the position of the floor, while the much thicker eastern terrace wall continues far deeper. It is this wall that still presents the most beautifully finished and splendid façade of all the structures of the Sixth City now remaining on the Trojan Acropolis.

In order to permit this handsome wall to be seen properly in its entirety, as it deserves, and with the further object of investigating a portion of the broad street which is believed to have run around the southern flank of the citadel, just inside the fortification, in the period of Troy VI, it was decided to clear the space between

House VI E and the City wall. This area was to a great extent occupied by the crumbling ruins of three houses, called VII ϵ , VII ζ , and VII η on Dörpfeld's plan, all of which had apparently been built in the earlier phase of Troy VII and had been thoroughly remodelled for reoccupation in the later phase, VIIb. So far as could be ascertained, almost no part of the ancient floors was left in place; already in previous excavations a group of eleven pithoi, sunk beneath the floor-level, had been uncovered in Room VII ϵ , a deep hollow had been dug in VII ζ , and three further storage jars had been brought to light in VII η ; while a trench on the western side of the area had been opened to a considerable depth along the face of the terrace wall of House VI E. The partition walls of these late houses were almost ready to fall, and after recording them by photographs and drawings, we demolished what remained of them and proceeded to dig into the underlying deposit, the undertaking being conducted by Professor Semple with a specially selected force of strong men. The removal of the walls proved to be a relatively easy matter; but round about them, and particularly in the western quarter, lay numerous stones of great size, the raising and transportation of which required no little engineering skill. All the débris was carried up the slope toward the west and deposited in Schliemann's broad Northeast Trench, and an extensive portion of the latter was filled almost up to the level of the original floor of the Megaron VI C. In the course of these operations some remnants of undisturbed deposit were encountered, principally in Room VII η , where, under a wall, a small jug, intact, and a good many fragments of pottery dating from VIIb were recovered. When all the fallen stones and rubbish had been carried away and we saw we had reached untouched ancient accumulation (Fig. 25), we dug three exploratory trenches, one across each room, which with their rich yield



FIG. 25.—EXCAVATION OF AREA BETWEEN HOUSE VI E AND SIXTH CITY WALL

of potsherds and other objects gave a good ceramic index of the strata lying between VI E and the city wall. The latter was found to be preserved to a height of considerably more than 2 m., with a finished inner face obviously meant to be visible. Although no real pavement was discovered definitely marking the level of a roadway, some lines of stratification were noted at approximately the appropriate depth to correspond with the finished state of the wall, and if they do not indicate a properly paved street they do at least, in the absence of remains of house-walls, allow the conclusion that the area was an uncovered one. We propose to complete the excavation of this space next year, and when the open plaza is revealed with the high city wall rising on one side and the lofty terrace of VI E on the other it should offer to visitors a striking demonstration of the monumental character of town-planning in the period of the Sixth City.

Our search outside the citadel for further cemeteries of the pre-classical age was conducted by Miss Dorothy Rawson in two widely separated districts. At the beginning of the campaign she examined the extreme eastern edge of the plateau of Ilion, some 300 m. southwestward of the modern village of Hissarlik, where certain ancient-looking rock-cuttings had attracted our attention. The place is called Ayetlebik by the peasants today. Our trenches speedily showed that the cuttings in the rock,



FIG. 26.—MOSAIC FLOOR IN NARTHEX-LIKE ROOM

as we had suspected, are really ancient, forming sides of rectangular shafts that were made for graves, and we soon ascertained that an extensive cemetery of Graeco-Roman Ilion occupies this region. The graves are principally of two kinds: many simply constructed of large curved tiles; others built of squared stone blocks, set on edge, with thick slabs laid across the tops to form lids. One example of the second type yielded an iron strigil, a bronze bowl together with its lid, and a glass vessel; but the majority of the graves contained only the skeletons of the dead, without accompanying objects. The period of use of this cemetery is indicated by many bronze coins found in our trenches (only one actually in a grave) which range in date from Hellenistic to late Imperial times. Not a sherd of pottery antedating the Hellenistic Age was brought to light, and it is clear that there is no early Trojan cemetery here.

On the plateau, not far from its eastern rocky edge, Miss Rawson found at no great depth remains of a mosaic pavement that seemed to merit further investigation. Under the superintendence of Remzi Oğuz Arık, our Commissioner, whose collaboration we gratefully acknowledge, the excavation was extended until a considerable part of a building was exposed. The best preserved mosaic is in a western room (Fig. 26), some 17.85 m. long from north to south, and 5.85 m. wide, which had no fewer than five doors: two, symmetrically placed on its western side, one in the middle of each end, and a large doorway in the center of the east wall. The floor of this long, narrow apartment is paved with a mosaic of small cubical tesserae, a broad border with a pattern of diamonds running around the entire room, and the central field divided into a series of five large rectangular sections. The first, third and fifth of these are elaborately designed medallions, showing circles enclosing squares which in turn hold smaller circles, the innermost of which contains an animal figure. Thus a stag appears in the central medallion, a bird, perhaps a dove, in the southernmost; while in the northernmost the inner circle has been so badly injured that the figure can hardly be identified. The second and fourth parallelograms are filled with an intricate arrangement of smaller geometrical patterns. The colors used, in addition to white, are red, orange, yellow, blue and purple, some of which occur in two or more shades, and the whole mosaic is bright and pleasing in effect. In the border, to the south of the eastern door, is a small panel, enclosing an inscription (Fig. 27), the Greek text of which suggests an early Christian date.¹



FIG. 27.—INSCRIPTION IN MOSAIC FLOOR

In a much larger adjoining room, toward the east, the mosaic floor has been sadly damaged, most of the mutilation being due to a series of many later graves which were dug through the pavement. The design seems to have comprised a huge circular panel in the center, surrounded by a complicated geometrical system of borders. The character of the building has not yet been definitely determined; but the narrow western room resembles a narthex and the larger eastern chamber might well be the nave of a church or a chapel, although the usual Christian symbols are conspicuously lacking in the decoration of the floor. The structure should probably be dated to the fourth or fifth century A.D.

The second area explored by Miss Rawson is a district on the far southwestern slope of the plateau, bearing the local designation "Hodja Ispirou," which probably records the name of a former owner. It lies approximately half way between

¹ For this Christian dedicatory formula cf. *Rev. Arch.* 33, 1877, pp. 55 f.; Reinach, *Traité d'Épigraphie Grecque*, p. 383.

our "R" trenches on the west slope, dug in 1932, and the cemetery discovered last year at the southern edge of the plateau. In this region Miss Rawson opened seventeen exploratory trenches, some small, others of considerable size, all of which were continued down to hardpan, wherever possible. In the upper part of the area, where native rock is not very deep, no undisturbed pre-classical deposit was found, except in two small hollows, cut in the soft limestone, that still contained a few potsherds of Troy VI. The inferior part of the incline, below some irregular ledges of no great height, is covered with a relatively deep accumulation of earth. Here, on the surface and in the superficial layers, fragments of Byzantine pottery and many bronze coins of the same period were recovered, while a deeper stratum, extending down to ca. 1 or 1.50 m., yielded remains of Roman and Hellenistic times. From this point on down to native rock, a further distance of 1 to 1.50 m., or even more, we found almost everywhere an unmixed and unmolested deposit of débris belonging to the Sixth City. From it emerged masses of potsherds, but animal bones and other rubbish, usually found on house-floors, were notably lacking; and since no

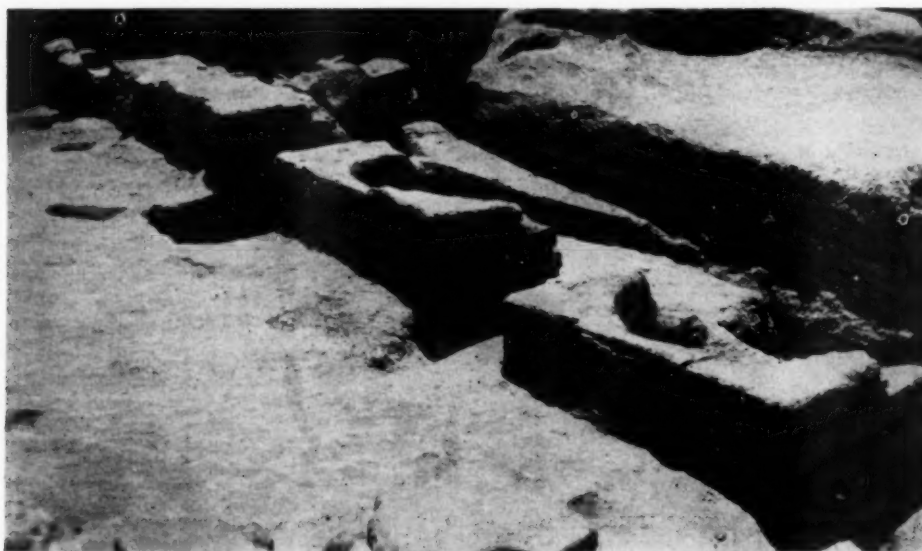


FIG. 28.—"PIERS" OF CRUDE BRICK, PERHAPS ONE SIDE OF A FURNACE

proper floor and no vestiges of house-walls were observed, it is clear that this is not a normal habitation-layer. We did, however, uncover some remnants of construction in crude brick, the interpretation of which offered a difficult, if not indeed insoluble, problem. These remains consist of a row of pier-like sections of masonry, built of two, three and four courses of carefully laid, large, flat bricks, which were at some time baked fairly hard by fire (Fig. 28). About 0.32 m. below the tops of the "piers" a hard pavement of similarly burnt clay extends ca. 1.50 m. northward to a neighboring ledge of rock, the vertical face of which also bears traces of a coating of baked clay. A mass of fallen brick to the west and another toward the east suggest

the conclusion that this narrow space, some 8 m. long, had probably been enclosed on all four sides. The piers, occupying the southern flank, are separated from one another by intervals of ca. 0.50 m. which were filled only with soft, sandy earth, and in which apparently nothing had ever been built. No indications of a roof or a top-covering could be certainly recognized; but the complex might be the remains of a large and elaborate furnace, or oven, with a row of stoke-holes, or air-passages along its front; and this explanation would account for the abundant traces of burning that have been noted. But the purpose of the "furnace" is not obvious. Certainly it was not utilized for ordinary cooking, or the whole area around it would have been littered with animal bones. A potter's kiln seems equally precluded, since there were no masses of mis-fired pots and of trial pieces to support such an identification. We may then venture to conjecture, in all diffidence, that the apparatus was used as a place for cremation, where the dead were burned on funeral pyres in close proximity to the neighboring cemetery in which, as we have seen, the urns containing the remaining ashes were piously inhumed.

Hollowed out in the hardpan throughout this region we found numerous artificial holes of various sizes, but almost all circular in plan. They looked as if they might have been made to hold pithoi or urns, set upright; but no such vessels had survived in place. Some larger shafts were also noted, and beneath the "furnace" was a huge, rectangular pit, more than 1 m. deep, ca. 3 m. wide, and some 10 m. long, the explanation of which we could not find. It clearly antedated the "furnace" since the latter rested in part on the sandy earth, clay and burnt debris filling the pit.

As already mentioned, a vast amount of pottery was recovered, but it was in a hopelessly shattered state and, although we did our utmost, it was not possible to put together a single vase complete. The fragments offered some fine examples of the best kinds of Sixth City ware, mainly from plates, cups, jugs, and large urns in gray Minyan; and there were also some pieces of imported fabrics of Late Helladic III.

As in previous seasons, we devoted as much time and attention as possible to the cleaning, sorting and mending of the pottery. Our five trained menders were kept constantly busy in the workroom, joining and restoring; and two younger boys were employed to assist in washing and cleaning. The members of the staff also took part in the patient search for joins, whenever opportunity offered. The material handled comprised more than 1200 separate lots of sherds, ranging from small bags to overflowing baskets, and its weight could only be measured in many tons. After being washed each lot was looked over by itself, its contents were noted, many fragments of coarse ware judged not to be useful were discarded, and the rest was brought into the workroom, spread out on tables, and subjected to scrutiny for possible joins. In spite of all our efforts, we were not able to cope with the unceasing fresh masses of incoming fragments, and much of this labor had to be left for attention next year. Almost 100 vases, mended and restored, were added to our inventory of pottery during the season, and the total has now reached approximately 500.

The abundance of material that had to be worked over soon raised an acute demand for table-space far in excess of that available in the large pottery room which we had erected in 1933, thinking it would be adequate for a long time to come. We

consequently felt ourselves obliged this season to build a spacious new wing, increasing the workroom at our disposal by more than 70 per cent. This wing was completed just at the end of the campaign and will be taken into service when our work at Troy is resumed next spring. Another building that had to be provided in 1935 was an additional storeroom to house the supplementary railway equipment we have now acquired; this was constructed at the back of the pottery room and has given us much useful storage space for other things as well as track. A third building likewise erected this year is a house for the permanent guard of our encampment and the excavations. The house stands on the southern side of the road coming from Hissarlik, in a position from which the site can conveniently be controlled; and we trust it may become the headquarters of the guard maintained by the Archaeological Service of the Government when our excavations have been finished.

During the campaign just concluded our expedition had the good fortune to be able to welcome the visits of many distinguished scholars whose words of counsel and encouragement were received with much esteem. Dr. Dörpfeld has already been mentioned; to his companion, Professor P. Goessler, we owe references to interesting analogies in the Bronze Age of Northern Europe. W. A. Heurtley, who participated as a member of our staff in the campaign of 1932, gave us this year the benefit of his knowledge of the prehistoric civilization of Palestine. E. J. Forsdyke, Keeper of the Department of Greek and Roman Antiquities in the British Museum, called to our attention much comparative material in his wide domain. To Dr. Schede, who was accompanied by Mrs. Schede, we are indebted for much valuable advice, particularly in connection with the remains of the Hellenistic period; and Dr. Bittel shared with us his profound cognizance of the prehistoric culture of Anatolia. Dr. Shevket Aziz Bey, Professor of Anthropology in the University of Istanbul, who has undertaken a special study of the skeletons found at Kum Tepe last year, gave us much help toward an understanding of the further skeletal remains we have recovered.

On May 19th we were honored by a visit of the American Ambassador to Turkey, Robert P. Skinner, and Mrs. Skinner, whose interest in our work and whose cordial and effective response to appeals for assistance in emergencies have left us heavily in debt.

Many other friends have likewise been helpful to the expedition, and we are happy to have this occasion to express our gratitude. As in previous years we are under great obligation to Dr. W. B. Wherry and Dr. Lee Foshay of Cincinnati, who have once again safeguarded us from many of the diseases endemic in eastern Mediterranean lands. We owe much to Dr. Shepard of Istanbul who left his work and instantly acceded to our call when the services of a physician were required. And once more we have to acknowledge the aid and the many favors unfailingly granted us by Mr. and Mrs. F. H. Bacon, Mr. and Mrs. G. Whittall, Major Lee, and Captain and Mrs. Jones of Çanakkale.

The officials of the Turkish Government with whom we have dealt have, as always, been most courteous and amiable, and have done all in their power to further the cause of our expedition. H. E. Abidin Özmen, the former Minister of Education

and G. M. Edgüer, the Under-secretary, were ever ready with their support and personal concern, and H. E. Saffet Arıkan, the new Minister, has promptly shown his interest in our enterprise. As heretofore we have uniformly been able to count on the coöperation and the help of Dr. Hâmit Zübeyr Koşay, the Director of the Archaeological Service, whose understanding treatment of our problems has greatly facilitated our labors. Our thanks are also due to the Director of the Museum of Antiquities in Istanbul, Aziz Bey, who has made all parts of his collections accessible to us. And finally we are glad to own our special bond of indebtedness to our friend and collaborator and Commissioner, Remzi Oğuz Arık, who in all perplexities has constantly stood ready to exercise his amicable influence in our behalf.

CARL W. BLEGEN

UNIVERSITY OF CINCINNATI

NEW INSCRIPTIONS FROM TROY

PLATE L

A SMALL amount of new epigraphical material has come to light at Troy during the University of Cincinnati's first two campaigns of excavation.¹ The greater number of the inscriptions found are fragmentary, and may yield information after prolonged study. A few, on the other hand, are preserved nearly or quite complete and are interesting in themselves as well as for the information they offer about the later history of Ilium. It has seemed advisable to give at this time the texts and a few notes on the more important pieces, preliminary to full publication at a later date.

Fragments of inscribed monuments have been found scattered in several areas excavated outside the city walls of Troy, notably in the theater and the palaestra-like building just south of the acropolis. In 1933 a comparatively large group of inscriptions, including those here to be discussed, appeared unexpectedly in an area of stratigraphical examination inside the citadel. Excavation in the lower end of the trench that runs north and south through squares F8 and F9 of Dörpfeld's plan² revealed what appears to be part of the foundations of a late Roman or Byzantine building. This rested directly on the stones of the Sixth City fortress wall (at this point nearly five meters thick) and extended about six meters further to the north. Its western edge lay within our trench, the eastern in ground as yet unexcavated. The foundations were built entirely of worked blocks, most of which were marble, presumably taken at random from the ruins of local buildings. These blocks were laid irregularly in two courses to a depth of more than a meter and were bonded with extraordinarily hard cement. No trace of the superstructure has been found, nor any indication of its plan. It seems probable that the building was never finished.

The blocks of which the surviving structure was composed were for the most part architectural: Doric and Corinthian column drums with members of their entablatures, and one fragmentary capital and a block of the pediment sima of the Athena temple of Roman Ilium. With these were scattered a few roughly squared blocks of local limestone and, most interesting of the lot, four columnar statue bases of marble, bearing dedicatory and honorific inscriptions. Although this form of base can be paralleled elsewhere,³ it seems to have been unusually common in Troy.

1. Columnar statue base; mouldings at top and bottom; height, 1.16 m.; diameter without moulding, 0.63 m.; height of letters, line 1, 48–51 mm., lines 2–9, 34–39 mm.; photograph *A.J.A.* 1934, p. 233, Fig. 10.

Ἡ βουλὴ καὶ ὁ δῆμος
Λουκίῳ Οὐίνουλείῳ Πα-
τακίῳ · ἐπάρχῳ σπεί-
ρης, χειλιάρχῳ λεγιῶνος
5 ἑκτης, ἐπάρχῳ εἰλης, ἐπι-

¹ Preliminary reports: C. W. Blegen, *A.J.A.* 1932, p. 431, and 1934, p. 223.

² *Troja und Ilion*, Taf. III.

³ Cf. e.g., Fränkel, *Die Inschriften von Pergamon*, Nos. 390, 515.

τρόπῳ Ἀυτοκράτορος
 Καίσαρος Οὐεσπασιανοῦ
 Σεβαστοῦ ἐπαρχειῶν
 9 Λιβύης, Ἀσίας, Θράκης

There are ligatures of ΗΜ, l. 1, and ΤΗ, l. 5. The Ο is written very small before ξ, ll. 1, 4; similarly, Α, l. 2, ΠΙ, l. 5; and the Ο of the diphthong is written in the fork of the Υ at the end of line 7. The Ι of improper diphthongs is omitted. The spelling of the words Venuleius, χιλίαρχος, ἰλη and ἐπαρχία is to be noted.

Vespasian's imperial procurator, L. Venuleius Pataecius, is not known from other sources, though several Venuleii of consular rank are recorded in Rome in the first and second centuries A.D.,¹ and a C. Novius Rusticus Venuleius Apronianus was Tribunus Militum (χιλίαρχος) of Legio VI Ferrata under Antoninus Pius.² L. Venuleius Pataecius, whose titles are here given in an ascending *cursus*, was evidently governor of the procuratorial province of Thrace; at another time he seems to have been steward or commissioner in charge of the emperor's property in Asia. He probably held a similar position in Libya. If the name Λιβύη designates the Egyptian *regio* or *νόμος* between Egypt and Cyrenaica,³ it is very surprising to find with it the term ἐπαρχία (= provincia). It is probable, however, that the province of Africa is referred to, for the Greek word Λιβύη was not infrequently used in this sense.⁴

2. On the opposite side of Base No. 1. The moulding and upper part of the stone are broken, but cuttings in the top and part of a clumsily scratched inscription on the preserved surface show that the base was reused at a later date. The remaining letters, 4–8 cm. high, are:

Ο . . . ΑÇΕΣ
 Ρ F AUG

There was no room for a line above, and the stone is intact on either side and below the inscription. The letters are so irregular in size that it is difficult to tell just how many are missing. There might have been four in the lacuna, scarcely less than three. The letter preceding the Α in line 1 was rounded at the bottom. The letter C is broken away at the top and could conceivably be restored as an L. The initial Ο is not certain.

3. Columnar statue base; mouldings at top and bottom; height, 1.28 m.; diameter at top with moulding, 0.65 m.; height of letters, 19–22 mm. (Fig. 1.)

The letters are neat but not deeply cut; their tips are broadened, sometimes noticeably forked; Α has the broken hasta, a form that appeared in early Hellenistic times in Pergamon; Ξ has three horizontal strokes not joined; the horizontal strokes of ξ are parallel, as are the vertical strokes of Μ; the Ι of improper diphthongs is omitted; all the letters take the full height of the line.

Ἰλιεῖς . . . πανηγύρεως, ll. 1–3, the title of the league of cities of the Troad, is to be found in other inscriptions from Ilium, e.g. Nos. XV and XX in Brückner's list in

¹ C.I.L. VI, 154, 2066; XV, 478; *et al.*

² C.I.L. III, 6814–16.

³ Pliny, *N.H.* V, 39, 49; Ptolemy, *Geog.* IV, 5, 3, 14.

⁴ Cf. Appian, *B.C.* IV, 53; *Mon. Ancyranum*, c. 25, 28; ἀνθύπατος Λιβύης, *Olympia*, V, p. 347, No. 236; Dittenberger, *S.I.G.* 840.



FIG. 1.—DECREE IN HONOR OF AGATHES,
SON OF MENOPHILOS

[Ι]λιεῖς καὶ αἱ πόλεις αἱ κοινωνοῦσαι
τῆς θυσίας καὶ τοῦ ἀγῶνος
καὶ τῆς πανηγύρεως ἐτίμησαν
'Αγάθην Μηνοφίλου Ἰλιέα
5 εἰκόνι τῇδε, προσκλήσει πρὸς τὰ ἱερὰ
καὶ εἰς τὰς προεδρίας αὐτῶν
καὶ ἐγγόνους, μετοχῇ τῶν κοινῶν
ἱερῶν καθ' ἕκαστον ἐνιαυτὸν,
ἀγωνοθετήσαντα τῆς κοινῆς
10 τῶν πόλεων πανηγύρεως
ἐπὶ ἔτη τρία εὐσεβῶς καὶ φιλοδόξως
καὶ ἀγορανομήσαντα ὑπὸ τὰ μέγαρα
[Ια]ναθήναια φιλοδόξως καὶ μεγαλομερῶς,
ἐπιτελέσαντα δὲ καὶ ταυροβόλια δις
15 ἐκ τῶν ἰδίων ἀπὸ πλειόνων ταύρων
τεσσαράκοντα ἐπισήμως τε
καὶ μεγαλομερῶς καὶ ἀξίως
τῆς πανηγύρεως ἀρετῆς ἕνεκεν
καὶ εὐσεβείας μὲν τῆς εἰς τὴν θεὰν
20 εὐεργεσίας δὲ τῆς εἰς τὴν πανήγυριν.

Troja und Ilion. The earliest mention of the league is No. 2 of that list, dated B.C. 306, where the wording is τῶν πόλεων τῶν κοινωνουσ[ῶν τοῦ] ἱεροῦ καὶ τῆς πανηγύρεως. Another, from the time of Antiochos I, reads [ἡ τε πό]λις καὶ αἱ λοιπαὶ πόλεις. Our formula, according to Brückner, is of imperial times.

The name 'Αγάθης is rare. A. Reinach took 'Αγάθην on an inscription in the Calvert collection¹ as the name of a woman, but the word may have been paroxytone. An earlier Menophilos, son of Glaucios, is mentioned at Ilium.²

προσκλήσει, l. 5, is here used obviously of an official invitation, though usually of a judicial citation or summons. For προσκαλέω, to invite, and for a parallel to the wording of our inscription, see Dittenberger, *S.I.G.*³ II, 748, ll. 48 seqq.

Agathes performed the taurobolium twice at his own expense with more than

¹ *Rev. Épigr.* 1913, p. 167.

² Schliemann, *Ilios*, p. 638.

forty bulls (ll. 14–16). The rite here referred to can hardly be the well-known blood bath described by Prudentius (*Peristephanon*, X, 1011) unless a number of people were initiated and purified on each occasion. The ceremony, which, according to Cumont (*Textes et Monuments*, II, 179), is not Mithraic, but which must have originated in the east, came into prominence in the time of the empire through its association with the cult of the Phrygian Magna Mater. For discussions of the taurobolium see Cumont, *Les religions orientales*; Graillot, *Le culte de Cybèle*; and Wissowa, *Religion und Kultus der Römer*,² in Müller's *Handbuch*, V, 4, under *Mater Deum Magna Idaea*, pp. 322–326. Little is certain about the taurobolium from the second century on, and the earlier period is still more darkly veiled. A fragmentary inscription from Pergamon,¹ dated by the second consulship of Aulus Julius Quadratus in A.D. 105, gives the earliest known reference to the taurobolium, in a list of contributions to sacrifices. Our inscription could well date from the same period, though internal evidence gives one little on which to base judgment.

4. Columnar base; mouldings at top and bottom; height, 1.10 m.; diameter at top with moulding, 0.70 m.; height of letters, 36 mm.; height of T's, 45–49 mm., Pl. L, A.

Ἡ κρατίστη βου-
λή ὑπὲρ τοῦ κοι-
νοῦ Ἑρκείῳ Διὶ
Προπάτορι

Priam, according to tradition, was killed at the altar of Zeus Herkeios, and Alexander the Great is said² to have been shown such an altar when he visited Troy on his expedition to the east. Worship of the god evidently persisted long at Troy. From the letter forms, especially Η and Τ, I should date this inscription in the second century A.D.

5. Columnar statue base; mouldings at top and bottom; height, 1.25 m.; diameter at top with moulding, 0.78 m.; height of letters, 26–40 mm., Pl. L, B.

DNF̄LCLCONSTANTINVS
NOB̄CAES

The surface of the stone above and slightly to the right of these words has been chipped away to erase an earlier inscription, as can be seen in the photograph.

Flavius Claudius Constantinus³ was born in February, A.D. 317, and was named to the succession with the title of Caesar on the first of March in the same year.⁴ He was entrusted with a military command in the west at a very early age and won the title of *Alamannicus*⁵ in 331. On the ninth of September, 337, some months after the death of his father Constantine the Great, he assumed the title of Augustus with his brothers Constantius and Constans, and ruled as emperor until his death in 340.

Two dates suggest themselves for our inscription: one, about 335, when the young Constantine had established his name and fame through military exploits; the other

¹ Fränkel, *op. cit.*, No. 554.

² Arrian, *Anab.* I, 11, 8.

³ The man of that name who usurped the throne of the Gallic part of the empire, A.D. 407–411, was apparently never in the east and cannot be associated with Ilium.

⁴ Eusebius, *Vita Constantini*, IV, 40; Mommsen, *Chron. Minora*, I, 232 (*Mon. Germ. Hist.* IX).

⁵ *C.I.L.* III, 7000; Dessau, *Inscriptiones Latinae Selectae*, 724.

(more tempting but perhaps less probable), early in 324, at about the time of his seventh birthday. In 323 Constantine I had routed Licinius at the battles of Adrianople and Chrysopolis and had reunited the command of the Roman world. Soon after, Licinius was put to death and "his memory was branded with infamy, his statues were thrown down, and by a hasty edict, of such mischievous tendency that it was almost immediately corrected, all his laws and all the judicial proceedings of his reign were at once abolished."¹ It is to be remembered that just at this time Constantine was seriously considering Troy as the site for his eastern capital.² It is thus not inconceivable that the people of Ilium, in an effort to please the emperor, might hastily erase some memorial of the reign of Licinius and dedicate in its place a monument to the young prince.

JOHN L. CASKEY

UNIVERSITY OF CINCINNATI

¹ Gibbon, *Roman Empire*, chapter XIV, *ad fin.*

² Zosimus, II, 30.

ARCHAEOLOGICAL NEWS AND DISCUSSIONS¹

NOTES ON RECENT ARCHAEOLOGICAL EXCAVATIONS SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

DAVID M. ROBINSON, *Editor*
Johns Hopkins University, Baltimore

NECROLOGY

Frank Cole Babbitt died at his home in Hartford, Conn., on September 21, 1935, after a year's illness. He was born in Bridgewater, Conn., June 4, 1867. He was Hobart Professor of Greek Language and Literature at Trinity College, and senior member of the faculty there. He graduated from Harvard in 1890, and received the degree of Doctor of Philosophy from the same institution in 1895. He was then appointed to a Fellowship at the American School of Classical Studies in Athens. While in Greece he assisted at the excavations in Corinth, where he had charge of the first work done in locating and clearing the Greek theatre (cf. *A.J.A.* I, 1897, pp. 481-494). From 1896 to 1898 he was an instructor in Greek at Harvard, and from 1898 until his death he taught at Trinity. He was the author of a *Grammar of Attic and Ionic Greek* (New York, 1902),

¹ The Department of Archaeological News and Discussions and of Bibliography of Archaeological Books is conducted by Professor DAVID M. ROBINSON, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor CARROLL N. BROWN, Miss MARY H. BUCKINGHAM, Professor SYDNEY N. DEANE, Professor ROBERT E. DENGELER, Professor VLADIMIR J. FEWKES, Professor JOHN W. FLIGHT, Professor HAROLD N. FOWLER, Dr. SARAH E. FREEMAN, Professor HENRY S. GEHMAN, Mr. E. BIÖREN GETZE, Dr. GERTRUDE GREYHER, Dr. BATTISCOMBE GUNN, Professor FRANKLIN P. JOHNSON, Professor ROLAND G. KENT, Dr. STEPHEN B. LUCE, Professor CLARENCE MANNING, Professor GEORGE E. MYLONAS, Professor ROBERT S. ROGERS, Professor KENNETH SCOTT, Professor JOHN SHAPLEY, Professor EPHRAIM E. SPEISER, Professor FRANCIS J. TSCHAN, Professor SHIRLEY H. WEBER, LOUIS C. WEST, Professor FRED V. WINNETT, and the Editors.

For an explanation of the abbreviations see Vol. xxiv, 1, p. 124, and Vol. xxix, 1, pp. 115-116.

and of a translation of Plutarch's *Moralia* (Loeb Classical Library, vols. I-III, 1927, 1928, 1931). He was a life member of the Archaeological Institute of America, and a Councilor of the Hartford Chapter; a member of the American Philological Association, president 1926-1927; and a member of the Classical Association of New England, president 1920-1921. During 1931-1932 he was the Visiting Professor at the American School of Classical Studies in Athens.

Maurice Holleaux.—A tribute to the memory of this distinguished scholar and archaeologist, Director of the French School at Athens from 1904 to 1912, whose sudden death on September 22, 1932, was a great shock to science, appears in *B.C.H.* lvii, 1933, pp. 1-5. At the time of his death he was a professor in the Collège de France. To him were due the excavations at the sanctuary of Apollo Ptöos, and the beginnings of the systematic excavation of Delos. His principal interest was in epigraphy, to which his contributions were of the highest importance.

Kurt Regling, well known director of the coin-collections of the Berlin Museums and honorary professor of Numismatics in the University of Berlin, died on August 10 at the age of 59. He was a very inspiring lecturer and teacher. His knowledge was broad: he was a philologist, historian, metrologist, and topographer, but he will be remembered best for his books on coins: *Der Dortmunder Fund römischer Goldmünzen* (1901); *Die griechischen Münzen der Sammlung Warren* (now in Boston; Berlin, 1906); *Die antiken Münzen Nord-Griechenlands* (vol. I, Dacien und Moesien, with E. Pick, Berlin, 1910); *Festschrift zu C. F. Lehmann-Haupt's sechzigstem Geburtstag* (with H. Reich; Leipzig, 1921); *Die Münzen von Terina* (Winckelmannsprogramm no. 66); *Die antike Münze als Kunstwerk* (Berlin, 1924); *Die Münzen von Priene* (Berlin, 1927); *Die antiken Münzen, Berlin, Staatliche Museen* (1929). He

arranged the coins of the museum in Istanbul and took part in the excavation of the sanctuary of Asklepios at Pergamon. Shortly before his death, he completed the *Beschreibung der römischen Medaillen des Berliner Münzkabinetts*, which ought soon to be published.

EGYPT

New Canaanite God.—On the basis of a granite group, depicting a falcon with a child Pharaoh crouched at its feet, which was unearthed at Tanis (Avaris) in 1934, Messrs. P. MONTET and P. BUCHER recover for us an old Syrian god named *Hurun*. The inscription on the statue reads: "*The good god, son of the sun, beloved of Hurun of Ramses.*" The "*Ramses*" referred to must be Pi-Ramses, the Deltaic capital of Ramses II, and not the king himself, for only the gods of this city are called "*of Ramses.*" If the reference is to the king, why are not the gods of the other places erected by Ramses called "*of Ramses*" too? That a god *Hurun* had gained a place for himself in Egypt by the end of the eighteenth dynasty is shown by the name of the last Pharaoh of that dynasty, *Horonemheb* (so to be read in place of Breasted's *Horemheb*), and also by the name of the Hittite wife of Ramses II, *Mat-Neferu-Râ-Hurun*. This was a period when Egypt was very open to foreign, especially Syrian, influences. And the Semitic origin of *Hurun* is suggested by the fact that *hurrin* is the Arabic name for the pilgrim falcon (but not in Egyptian or Coptic); also by the Biblical names *Beth Horon*, *Horonite* (which must be a derivative of the god name and not from the place name, which would be Beth-horonite), and the *Horites* of Mt. Seir (who according to the authors cannot be the same as the Hurrians because the names of the two peoples are spelled with a different initial consonant in Egyptian). In all probability *Hurun* was the falcon god of the Horites of Mt. Seir.

Tell el-Amarna.—The results of the latest campaign at Tell el-Amarna are described in *The Illustrated London News*, October 5, 1935, pp. 564-565, by J. D. S. PENDLEBURY, the Director of the Egypt Exploration Society's Expedition. Excavation was carried on in the official palace of Akhenaten, which had been partially cleared by Petrie in 1891. First a large hall at the south end of the palace was investigated. It may have been the Accession Hall built at the time that Smenkhkara became Co-regnant with Akhenaten, since some of the bricks bore his cartouche.

The walls were decorated with faience plaques, with a design of white daisies on a green background. Later, most of the harem quarter was re-excavated, including a garden court with its surrounding colonnade. In a large hall south of the harem were found thousands of fragments of granite colossi of the king which had been ruthlessly destroyed after his death. A number of fine pieces of sculpture were found which had escaped destruction, when they were discarded during a rebuilding project, about the ninth year of Akhenaten's reign, and buried in a deep fill of sand to form a parade ground. A number of sculptor's trial pieces were found, almost perfectly preserved.

THE ORIENT

ASSYRIA AND BABYLONIA

Mari.—A report on further discoveries by the Louvre Expedition excavating on the site of Mari, by the Director, ANDRÉ PARROT, is to be found in *The Illustrated London News*, September 7, 1935, pp. 401-403. The most interesting discovery made during the last campaign was a large palace which was built toward the close of the third millennium B.C., and destroyed by Hammurabi, king of Babylon, about 2000 B.C. Less than half of the building was excavated, though this included sixty-nine rooms, covering an area of some five thousand square meters. It is in an excellent state of preservation, the walls still rising in many places to a height of from four to five meters. The doorways are in many instances complete, and appear to have been the chief source of light and air. The floors are generally paved with brick, though a few are of plaster, still intact. Household furnishings still in place aided in the identification of the rooms. A number of bathrooms were cleared, each with one or two baths. In the chief rooms the walls were decorated in black and red bands or a blue and white spiral pattern. There were two schoolrooms with benches still *in situ*. The names of the royal family living in this palace are known: four princes, Iloumisar, Iahdoun-lim, Iagid-lim, and Ishtoup-iloum. These names were ascertained through the decipherment of more than sixteen hundred clay tablets discovered in the library. The palace was sacked and burned by the Babylonians, but among the heavy objects which the plunderers left was a statue of Ishtoup-iloum, which is even now in perfect condition.

— At Tell-Hariri (ancient Mari) has been found a temple of Ishtar which resembles one at Asshur which belongs to the end of the fourth

millennium B.C. It contains statues with inscriptions showing the earliest stage of cuneiform. In the same place were also found 1600 tablets in a good state of preservation. (*Palestine Exploration Fund, Quarterly Statement, July, 1935.*)

PERSIA

Exhibition of Persian Art.—In *The Illustrated London News*, August 24, 1935, pp. 311-314, there are pictures of some of the outstanding pieces of Persian art, which are to be shown in the great International Exhibition of Persian Art, to be held in Leningrad, opening on September 10. Nearly ninety per cent of the existing objects of art from regions north and east of Persia is to be found in Russian collections, much in provincial museums. It is all being gathered together at Leningrad for the first time. Thus it will be possible to study and compare the art of many different cultures; for instance, the Luristan bronzes with bronzes from Siberia. Many problems will be discussed by the third International Congress on Iranian Art, which will meet in Russia at the same time. A number of exhibits are being sent from other countries. The whole exhibition will occupy eighty-four galleries.

Khorsabad.—In *The Illustrated London News*, September 28, 1935, pp. 505-507, and one color-plate, there is an article on the most recent discoveries at Khorsabad by GORDON LOUD, Director of the Khorsabad Excavations, for the Iraq Expedition of the Oriental Institute. Khorsabad was built by Sargon on the site of Dur Sharrukin, and for a short time in the eighth century B.C. it replaced Nineveh as the capital of Assyria. The city wall encloses an area about a mile square. There were two gates in each of three of the walls, and one on the fourth side. The palace was built both inside and outside the city. During the previous campaign the city around that part of the palace inside the city was discovered. This last season was chiefly devoted to completing the excavation of this citadel. The citadel enclosure measures about three hundred by six hundred and ninety meters. A ramp fifty-two meters wide leads from one gate to the principal entrance of the palace. Just to the right of the gate was a house belonging to Sinahuser, Sargon's brother and Grand Vizier. It was identified by an inscription on the door-sill. At the left, opposite the house, is a group of buildings, one of which has been identified as the Nabu Temple. There is also another private residence, occupied obviously by

an important person. Enough was found to permit a restoration of the elaborate decoration on the walls of the reception hall. This restoration is reproduced in color. Sargon's palace was located on the terrace above the northwest town wall. A second palace, about two-thirds as large but built on an equally massive scale, was found above the southwest wall. It has not been identified as yet, but it must have been occupied by an important member of the royal family, possibly Sennacherib, the Crown Prince.

SYRIA AND PALESTINE

Athlit.—Between the fort at the southeast corner and the beach a large compound containing stabling for over two hundred animals has been uncovered. It probably belonged to the native auxiliaries rather than to the Templars themselves, being too far from the castle for them to have visited their mounts twice during the night as the Rule of their Order required. In plan it resembled somewhat an oriental khan, consisting of an enclosed yard with stables, store-rooms, and living-rooms around the sides, and a well in the center. Along the west side, facing the beach, was another row of stabling which had no communication, however, with the enclosed yard. It had its own well and feed-rooms. The stables were of similar construction, with flat roofs about eleven and a half feet high. The smaller rooms had high troughs divided into separate mangers and so were evidently intended for horses (a few horseshoes were found); the larger rooms with their low continuous troughs must have been intended primarily for cattle. The coins discovered are all Crusader or Ayyubid. Mamluke coins come only from the drift-sand above the ruins. Hence the polychrome glazed pottery and slip-ware found in the ruins must be definitely Crusader material; and the blazons of "Saracenic" form which appear on many sherds, notably the roundel and key, must now be considered as either Ayyubid or Crusader, and not Mamluke as once thought. (C. N. JOHNS, in *Q.D.A.P.* v, 1935, pp. 31-60.)

Ishchali.—In *The Illustrated London News*, September 21, 1935, p. 475, there is a short report of the first campaign at a new site in Iraq, by DR. HENRY FRANKFORT, Director of the Iraq Expedition of the Oriental Institute. Ishchali is situated about three miles from Khafaje. The work there was under the supervision of DR. THORKILD JACOBSEN. The surface layers date from the reign of Hammurabi, about 1900 B.C.

The fortification wall and a gate were first located. Nearby was a temple with three sanctuaries. The deity worshipped in one was identified from an inscription as Ishtar-Kititum. The sanctuary consisted of a cella, with a niche at the end, probably for the cult-statue. This could be seen, through the open door, by worshippers standing in the forecourt. A terracotta plaque was found with a representation of the goddess, which probably was a copy of the cult statue. Among other objects found was a fragment of a stone vase, with kneeling figures of moufflons carved in relief on the outside.

Jericho.—In *R.B.* xlv, 1935, pp. 583-605, PÈRE VINCENT points out that the most recent excavations at Jericho only tend to confirm the date which he long ago proposed for the capture of the city by Joshua, viz., about 1250 B.C. Garstang himself admits that the archaeological evidence witnesses to an occupation up to the Ramessid period, c. 1200; but to preserve his theory of a destruction of City IV about 1400, he attributes the archaeological material of later date to a hypothetical garrison set up here by Ramses II or III. As a matter of fact, there is nothing whatever to support such a theory. The remains both on the *tell* and on the necropolis are too numerous to suit the theory of a mere garrison and a foreign one at that; they demand a city as their explanation. Moreover, if Jericho were destroyed c. 1400, other nearby sites would have suffered at the same period. Yet the recent soundings of Albright at Bethel revealed an uninterrupted archaeological sequence from the dawn of Bronze II up to the second phase of Bronze III, i.e. to the thirteenth century. And the excavation of other sites confirms these findings, that there was no break in this region c. 1400. Albright has recently proposed a date 1360-1320 for the capture of Jericho, but Père Vincent wants to know why he ends the second phase of Bronze III sixty years earlier at Jericho than he does at Bethel. It is to be hoped that Palestinian archaeologists will heed his closing appeal for a greater uniformity in their nomenclature and chronology.

— In the opinion of ALBRIGHT, the fall of Canaanite Jericho cannot be placed too low, but he considers the date of Garstang too high (c. 1400). On the other hand, Vincent's date in the second half of the thirteenth century is considerably lower than the evidence justifies. On the basis of archaeological evidence alone, the most reasonable date is in the second half of the

fourteenth century. We can say fairly definitely that the Conquest began after the Amarna Age, but probably before the revival of Egyptian power under Seti I. The Shephelah of Judah was conquered (at least in large part) in the second half of the thirteenth century B.C. (*Palestine Exploration Fund, Quarterly Statement*, July, 1935.)

— According to GARSTANG, the evidence derived from each separate piece of investigation, among the walls, in the tombs, and the stratification of the palace area points unanimously to the same conclusion, namely that the normal life of Bronze Age Jericho was brought abruptly to an end during the reign of Amenhotep III (1411-1375 B.C.). Canon W. J. Pythian-Adams maintains that the excavational evidence from Jericho now proves unambiguously that the invasion led by Joshua took place about 1400 B.C. (*Palestine Exploration Fund, Quarterly Statement*, April, 1935.)

An Inscription from Seleucia in Pieria.—This inscription from Syria, found in 1931, and published first by H. Seyrig in *Syria*, xiii, is the subject of an article prepared by the late MAURICE HOLLEAUX before his death, and posthumously published in *B.C.H.* lvii, 1933, pp. 6-67. The text is first transcribed, and shows two distinct documents; one is a decree of the city of Seleucia, the second a letter from the king, Seleucus, to the city. The decree was made in consequence of the receipt of the letter, to which it refers. The date of the inscription is fortunately preserved—"the year 126, 30th of the month Daisios"—or June 186 B.C. The Seleucus in question is therefore Seleucus IV, second son of Antiochus III Megas, and his successor, whose reign began in 187. This letter was written about eight months after his official accession to the throne. Holleaux then discusses what was already known from epigraphic sources about this king, and shows how very important this new document is. In commenting on the inscription, the royal letter is first discussed. In the decree it is described as a *πρόσταγμα*, and the meaning of this word is next considered. Its meaning is an order, or edict; but this order is couched in the form of a simple letter to the city. Parallel instances from other inscriptions are given, and the *προστάγματα* of the Seleucids in letter form, already known, are analyzed. The inscription is then commented on line for line, beginning with the king's letter, which is addressed to a certain Theophilus, and the archons and city

of Seleucia. This Theophilos is the king's representative (*ἐπιστάτης*) charged with the surveillance and maintenance of the city, particularly in the fields of order and justice, and in providing for its security and defense—in other words, a combination of civil governor and military commandant, having under his orders the troops of the garrison. The appointment of *ἐπιστάται* was common elsewhere, and was later copied by the Parthians, and in the cities of Asia subject to Rome. The text of the letter is then commented upon. It deals with a certain Aristolochos, a noble of the court, and friend of the king, who was very much in the royal favor. Parallel examples of decrees in honor of royal favorites are cited, both from literary and epigraphic sources. This man was apparently well known to the Seleucians, and bore the same name as his father. He was probably not a functionary, but a courtier, and was attached, not merely to Seleucus, but in the past to his father and brother. At the time of this inscription, he was probably of advanced age. The letter orders the erection of a bronze statue of this man, who had been the loyal friend and adviser of the royal house in most troublous times at Seleucia, where he was planning to reside. A translation of the royal letter follows this commentary. Holleaux then takes up the decree which precedes it. First, the question of the archons is discussed, a group of men associated with the *ἐπιστάτης* in the government of the city, whose number and powers we do not know, nor the manner in which they were chosen; but we may assume that they were representatives of the city, chosen by the citizens to act with the *ἐπιστάτης*. Similar decrees already known are then cited. Our inscription is very brief compared with others, and a textual and grammatical commentary is then given for lines 1–20. Finally come the resolutions (ll. 20–27) which give Aristolochos the freedom of the city, and decree the erection of the statue. Holleaux first discusses the statue, pointing out that no provision is made for the expense of its erection, but merely that the *ἐπιστάτης* and archons shall determine the site in the *ἀρχεῖον*, or building used by the archons as a council chamber. Parallel instances of the erection of statues in such places are given. The first clause, extending to Aristolochos the freedom of the city, is then taken up,—this was done, perhaps, at the solicitation of the king, and his name was inscribed by deme and tribe, showing the internal organization of the city. The tribe Laodikis, here given, took its name in all probability from

Laodice, mother of Seleucus I Nikator. The deme, Olympieus, cannot be so easily solved. The article ends with a translation of the decree.

Teleilat Ghassul.—In *R.B.* xliv, 1935, pp. 69–104, 220–244, PÈRE VINCENT subjects to a searching criticism the interpretations placed on the finds at Teleilat Ghassul by PP. MALLON and KOEPEL. He insists that there is nothing original about this Ghassulian culture; almost all its features can be paralleled in the contemporary culture of Palestine. Level I is equated with levels XVIII–XVII at Beisan, stages VII–VI at Megiddo, sites E and O at Fara'a, and the lower suburbs of Tell Duweir; level III with stage IV of Megiddo and level XV of Beisan. Level IV with its bronze axes and mural paintings is to be placed at the dawn of Bronze II, ca. 2000–1900 B.C. That these paintings are not exceptional is shown by the designs on the painted pottery of Gezer and Megiddo which testify to a high standard of artistic achievement in Palestine, although the larger creations of the Palestinian artists have not survived owing to different climatic conditions. Of a great cataclysmic destruction of the Ghassulian culture, such as claimed by Père Mallon, there is no evidence whatsoever. Therefore the attempt to locate in this region north of the Dead Sea the sites of Sodom and Gomorrah is deprived of any support from the excavations.

Tell Abu Hawam.—In reviewing the work done here, PÈRE VINCENT maintains that there is no proof that City III was destroyed by Shishak I in 925 and the site then deserted until the second half of the sixth century B.C., as alleged by HAMILTON. The almost total absence of the coarse ring-burnished red-slip pottery characteristic of the late ninth and eighth centuries can be explained by the fact that this pottery is of "Israelite" origin, whereas the city was Mediterranean rather than Israelite. Furthermore, the delicate red and yellow slip ware found in City III is dated at Sabastya up to the end of the ninth century. Thus, although the city quite manifestly suffered at the hands of Shishak in 925, it was not completely abandoned, the pottery evidence pointing to a continued existence for another hundred years. City IV was apparently the creation of the Phoenicians of Tyre during the sixth or early fifth century. A reference to it is probably to be found in the *Periplus of Pseudo-Scylax* (c. 335 B.C.), who, in describing the Phoenician littoral, refers to a Tyrian city between

Acre and Mt. Carmel by the name of $\pi\eta$. The text is manifestly corrupt and has been restored with some plausibility by Ch. Müller to 'H ϕ á, preserved in the modern Haifa. This is no doubt the old Phoenician name for the site. After the destruction of the city (by Alexander in 332 B.C.?), it was rebuilt on a new site on the shore which had gradually receded. (*R.B.* xlv, 1935, pp. 416-437, plates xvii-xxii.)

Recent Discoveries at Tell Asmar and Khafaje.

—In *The Illustrated London News*, September 14, 1935, pp. 429-432, color pl. 1, DR. HENRY FRANKFORT, Director of the Iraq Expedition of the Oriental Institute of the University of Chicago, gives a brief account of the recent discoveries made at Tell Asmar and at Khafaje. This year's campaign threw considerable light on the relative chronology of Mesopotamian civilization.

At Tell Asmar the excavation of a temple begun last year, when the first Babylonian cult statues were discovered, was completed. The building was founded in the Jemdet Nasr period. Twenty-six successive levels were disclosed above this, covering about one thousand years. A quantity of pottery and seals dating from the first part of the Early Dynastic period were found. Finds from this period have been very uncommon on other sites. A new type of pot has four tubular lug handles on the shoulder and a flat rim. A goblet with solid foot also belongs to this period. Six hundred and sixty-three of them were found at one level. In the lowest stratum were seals of glazed steatite with geometric designs.

The work at Khafaje was under the supervision of MR. P. DELOUGAZ. He continued the excavation of the temple of the Moon god. Here were found the copper head of a bull, a relief plaque depicting a feast, and a schist figure like a lion-headed eagle bearing an inscription which has not yet been deciphered. At a very low level fragments of terracotta figures of nude women were discovered, perhaps representing a Goddess, with tattoo marks indicated on the shoulder. They are connected with figures of an earlier period found at Ur. There were a number of graves near the temple. The bodies were buried in a crouched position under the house-floors, and then the graves were vaulted over with mud brick. Sometimes the body was placed in a basket or wrapped in matting. Among the objects buried with the dead were flasks of black pottery, beads of steatite, carnelian and shells, and many amulets. In a small shrine between the two large temples was found a

sculptured vase of green stone dating from the Jemdet Nasr period.

Tell Duweir.—It is now almost certain that Tell Duweir is the ancient Lachish. In January, 1935, potsherds which probably date from 588 B.C. were discovered in this place. Their Hebrew inscriptions, which are in ink, contain the following Old Testament proper names: Gemariah, Hagab, Metaniah, Neriah, Jaazaniah, and Jeremiah. (*Palestine Exploration Fund, Quarterly Statement*, April, 1935.)

—A preliminary report of the third season's campaign at Tell Duweir is published in *The Illustrated London News*, July 6, 1935, pp. 19-21, by J. L. STARKEY, Director of the Wellcome Archaeological Research Expedition to the Near East. Tell Duweir is located about twenty-five miles southwest of Jerusalem. During the early chalcolithic period, in the third millennium B.C., the town was spread out over an area of some two hundred acres. Many of the population lived in caves. There were two types of cave-dwellings, some large and rectangular, others small, and more oval in shape. The caves were later re-used as burial places. In excavating these graves, fine examples of hand-burnished pottery, copper daggers, and a gold bead were found. A large cemetery of the late chalcolithic period was also discovered. Not much has been found as yet from the period immediately prior to the invasion of the "Hyksos." A temple was revealed during the investigation of a moat which formed part of the fortification around the city. It was built of mud and stone. A great quantity of vases and offering vessels were found buried below the mud which had preserved the temple. Seven of the scarabs found bore the name of Amenhetep III. Near the altar were the fragments of a large ewer, with an inscription painted on the shoulder in proto-Phoenician script. Another example of this writing was found on the base of a small bowl. The original building of the temple is probably to be placed at the end of the fifteenth century B.C., while the city was still under Egyptian control. Later, during the period of Jewish occupation, the city was fortified by a double wall of stone. Little excavation has been done among the remains of this period. There is clear evidence of the Babylonian siege and the complete destruction of the city. Subsequently the city was resettled by the Persians during the reign of Cyrus, and a palace was built over the Jewish fortifications. This has been excavated.

In *The Illustrated London News*, August 10, pp. 240-242, Dr. Starkey continues his report on the recent excavations at Lachish, discussing particularly the inscriptions. The ewer, which was mentioned above, belonged to the last period of the temple, the first half of the thirteenth century B.C. The letters painted on the shoulder are closely connected with a recent inscription from Ras Shamra and the early Phoenician text from Byblos. They constitute a link between the more pictographic Sinaitic script and the Phoenician. The occurrence of the letters on the ewer and on the bowl would seem to indicate a knowledge of reading and writing by the common people.

Dr. Starkey also discusses briefly the "Lachish Letters," which date some six hundred years later. They were discovered below a gate tower of the Persian period. Their complete decipherment will give important information on the Biblical period. The letters were written on pottery fragments, and are thus comparatively well preserved.

Chronology of Palestinian Epigraphy.—In the *Palestine Exploration Fund, Quarterly Statement*, July, 1935, T. H. GASTER discusses the chronology of Palestinian epigraphy. In establishing the chronology, Gaster arranges an epigraphic sequence rather than a temporal chronology in this order:

(1) The Proto-linear, which was probably of syllabic character. It occurs in the Early Bronze levels (2500-2000 B.C.) and is found on pottery markings from the lowest strata of Tell el Hesi and Gezer. It is identical with that found in the First Dynasty tombs at Abydos and on Minoan and Mycenaean seals. It is also found in Middle Bronze Age (2000-1600 B.C.). This script has not yet been deciphered.

(2) Sinaitic, which has three stages of development in Palestine. This script comes from Serabit al Hadem (c. 1850 B.C.). The first period of this writing in Palestine is found in the Middle Bronze period on a jar-handle discovered at Gezer in 1929. When this writing shows deterioration from the original pictographs, but no Phoenician crossing, it belongs to the second period, of which the known example is the Tell-el Duweir ewer, dated c. 1250. When it shows the influence of Phoenician formal shapes, it belongs to the third period, as the ostrakon found in 1929 by Grant at Ain Smemesh.

(3) Alphabetical Cuneiform, as exemplified in the Ras Shamra tablets, which are dated in the thirteenth century B.C.; the script, however, is most probably older. It appears to be an adapta-

tion from a form of writing standing between Middle Sinaitic and Early Phoenician; the influence of the latter is plainly discernible.

(4) Early Phoenician, which lasted roughly from the thirteenth to the ninth century B.C., clearly points to Sinaitic prototypes. The earliest document we possess is probably the inscription on the sarcophagus of Ahiram at Byblos, which Gaster dates in the twelfth century B.C. In the same style are the inscription of Yehaw Milk from Byblos, the Gezer agricultural calendar of the tenth century, and the Mesha stone dated c. 850 B.C.

(5) Second Phoenician, which is dated in the eighth century B.C., occurs in two forms. The straight form was employed in the famous inscription in the Siloam tunnel. The cursive form is found on ostraca in the treasury of Ahab's palace in Samaria. The differences in this writing can be explained as due to the nature of the materials employed.

Coins.—REIFENBERG (of Jerusalem) publishes fourteen rare and hitherto unpublished coins dating from the Maccabean period and the Herodian Dynasty. (*Palestine Exploration Fund, Quarterly Statement*, April, 1935.)

ASIA MINOR

Discoveries.—K. BITTEL describes a number of small discoveries belonging to the pre-Classical period (*Arch. Anz.*, 1934, pp. 349-363). Several bronze axes belong to known types. Among the things from old excavations at Kültepe is a terracotta coffer of a type known in several examples. Possibly such coffers contained inscribed clay tablets, though they could be cult utensils of burial urns. An animal, on top, has symbolic meaning. A clay tablet from Alishar has two animals stylistically like those on the coffers, and belongs to the first millennium B.C.; the coffers have usually been dated much earlier.

The Cothurnus and Some Lydian Proper Names.—Although Greek men and women, when travelling, wore the high boots called *κόθορνοι*, the word has no Greek origin and it is used by Herodotos (I, 155; VI, 125) in connection only with Lydians. It occurs in Lydian glosses at Sardis and on Lydian coins of the Imperial epoch but not elsewhere. Hence we may safely infer that the Greeks derived both the word and the article from Lydia. Another sort of shoe, the *'ασκέρα*, which occurs in these Lydian glosses, is defined by Hesychios, is referred to as "thick" by Hipponax,

and may underlie the address of the Delphic oracle to Croesus as *Λυδὲ ποδαβρέ* (Hdt. I, 55).

To the list of Lydian proper names found in the Greek inscriptions from Sardis may be added: *Βορων*, *Κυαμας*, *Μανίτας*, *Τόρις*, *Δαμας*, *Ιθαρος*. The second and fifth names appear to contain the Lydian Ma, for the Magna Mater. (J. H. JONGKEES, *J.H.S.* lv, 1935, pp. 80-81.)

Two Documents from Phrygia and Cyprus.—A stele found in 1934 on the site of Apamea-ad-Macandrum (Dinar) and dated in the period 188-159 B.C. by a reference to Attalus, brother of the king, is earlier by a century than any other known inscription from this place. It is a decree honoring one Kephisodoros as a generous public benefactor, and although incomplete at the bottom and sides, it gives documentary proof of many features of life at Apamea analogous to those at Pergamum, such as the *boulé* and *demos*, the honors bestowed on public spirited citizens, the gymnasium with its cults of Hermes and Herakles, the Ephebe and Boys, the Young Men's cult of their Attalid rulers, the military requisitions and patriotic contributions. A somewhat later decree found also in 1934, in a house in old Paphos (Kouklia) not far from the temple of Aphrodite excavated in 1888, lacks the top and part of the left side and much of the restoration must be conjectural, but it evidently concerns a high official (name lost) from Patara in Lycia, who was in charge of some department probably connected with the royal artillery. He is to be crowned with a golden wreath, a painted portrait of him is to be placed in the precinct of Paphian Aphrodite, and a day observed every year in his honor by members of the senior and junior corps of gunners—by the seniors, in the old city, with sacrifices to Aphrodite, by the juniors, at Paphos, with sacrifices to Leto. The members, in this case, *οἱ νέμοντες*, are the privates who served under the trained officers, *οἱ ἀφέραι*. The individual honored is an *ἀρχιτέκτων*, an engineer, evidently a designer of ballistic machines. The lettering indicates a date in the half-century 150-100 B.C., a period in which this type of military club was popular among mercenary troops such as were then quartered on the island. This inscription, with other dedications to military men in the Ptolemaic period, suggests that Paphos was the headquarters in Cyprus of the Ptolemaic army and navy, and this may explain why the Romans made it the capital of their province of Cyprus. The coupling of the Lycian goddess Leto with the

Cyprian Aphrodite indicates that Lycian troops maintained a sacred precinct for her at Paphos. (W. H. BUCKLER, *J.H.S.* lv, 1935, pp. 71-78.)

Aeolian Larisa.—A report on the campaign of the spring of 1934 is published by J. CROME and K. SCHEFOLD (*Arch. Anz.*, 1934, pp. 363-410; for a report of earlier work cf. *A.J.A.* xxxviii, 1934, p. 291). The wall of the acropolis has been further cleared; in 500 B.C. there were surely nine towers, probably more. The most notable building of that time was a structure *in antis* with vestibule, main room and two back rooms; fine polygonal walls; no evidence for columns, but the fine Ionic capitals previously published could belong. Nearby and ill preserved is, perhaps, the early palace of the tyrants. For the temple, whose capitals have long been known, important results were reached. The original *oikos*, only 3.25 m. by 6.25 m., was built ca. 600. It had no columns, but a peristyle was added before 550; probably there were two rows of columns across the west end. Some rebuilding took place ca. 530. The temple stood on a podium, with steps and the entrance at the west and the altar at the east; all this as at Neandria. Fragments were found of a terracotta frieze, which probably belonged to the temple, and numerous other architectural terracottas. After the Persian wars a new acropolis wall was built, enclosing a larger area. The structure *in antis* was retained; it and new structures enclosed a court. Near it are rooms, some of megaron type, opening on another court; these, constituting the largest building on the acropolis except the later palace, should be government buildings. At this site as elsewhere in Aeolis, there are two chief periods in the fortifications; sixth century, with polygonal masonry, and fourth century, with rectangular. An aqueduct 2.50 km. long, 0.65 m. wide, and up to 6 m. deep has been noted. Much geometric pottery was found, usually without a white slip. Bucchero was more abundant than pottery with orientaling decoration; in the latter concentric circles are a common pattern. No stone sculpture was found, or inscriptions, except graffiti on vases. Thirty-three *Kleinfunde* are briefly described. The older excavations are soon to be published in three volumes; the more recent work thereafter.

GREECE

GENERAL AND MISCELLANEOUS

Ares at Coronea.—As corroborating I. R. Arnold's conjecture of a chthonic Ares as the vanquished predecessor and rival of Athena at

Coronea (*J.H.S.* liv, 1934, p. 206; *A.J.A.* xxxix, 1935, p. 390), A. D. URE cites a Boeotian vase in the Louvre on which Athena accompanied by Herakles is in combat with a mounted Ares whose attendant has the significant name of Gagenes, "earth-born." It is a black-figured lekane, of the last quarter of the fifth century and in the style then prevalent in southern Boeotia, but at present it cannot be further localized. (*J.H.S.* lv, 1935, pp. 79-81.)

Bothroi.—A survey of the published evidence for prehistoric and primitive house-pit—excavations in the ground within the area of dwellings but not connected with their structure—such as are found in all Greek lands, in the Danubian countries, Russia, England, and elsewhere, leads to the conclusion that, although often containing ashes, they rarely if ever had a sacrificial purpose, but that they were in some places used for cooking, as indicated by a slanting flue leading up to the surface, or for deposit of rubbish, but most often served for storage of grain or other foods and sometimes, apparently for drainage, superfluous water being accumulated in a hollow from which it could be bailed out. The pits are of all shapes and sizes, circular, oval or square, and usually irregularly placed. Sometimes, undoubtedly, they were covered by a wooden floor. If dug in soft or unstable material like humus or gravel they were lined with clay or small stones, and in the Fayûm some granaries had an inner lining of coiled wheat straw. House-pits are to be distinguished from the hollows made for holding storage jars and shaped to fit the pointed lower ends, such as have been in use in Greece since neolithic times. (R. HUTCHINSON, *J.H.S.* lv, 1935, pp. 1-19.)

Greek Commerce with the West, 800-600 B.C.—In *B.S.A.* xxxiii, 1932-1933, pp. 170-208, ALAN BLAKEWAY discusses in detail the archaeological evidence, for the most part pottery, for Greek commerce with Italy, Sicily, and France in the eighth and seventh centuries B.C. The evidence is examined site by site and is very extensive. Greek commerce preceded Greek colonization in the West, and sites for colonies were chosen, in part at least, for commercial reasons. Down to a period about 735 to 690 B.C. the West received Greek products from various parts of the Greek world, but from that time until the end of the seventh century there is a great preponderance of Corinthian pottery. This cannot be explained by greater excellence of Corinthian ware, for other wares were equally good. Apparently Corinth and

Chalcis were at that time working hand in hand. The appearance of East Greek pottery in the West and Corinthian pottery in the East, in the last quarter of the seventh century, may be connected with the alliance of Periander of Corinth and Thrasybulus of Miletus. This article is entitled "Prologomena," and is intended to point out that Greek history cannot be properly written without due attention to archaeological evidence.

Journeys in Crete, 1934.—In *B.S.A.* xxxiii, 1932-1933, pp. 80-100, J. D. S. PENDLEBURY, M. B. MONEY-COUTTS, and E. ECCLES give an account of some expeditions made from Knossos in 1934 by members of the British School at Athens, in the course of which over thirty-five new sites were found. The regions visited were the Pediada district, Central Crete, Malevizi (i.e. a region south and southwest of Candia), and East Crete. Most of the sites visited are small. Walls and lesser objects range from Early Minoan to Roman and later times. Some sixty or more sites are described.

Excavations at Delos.—In *B.C.H.* lvii, 1933, pp. 98-169, J. CHAMONARD describes the campaign made during the season from July to September, 1930, to the south and in the vicinity of the theatre, close to the "House of the Dolphins" discovered in 1887 by P. Paris, and east of the complex of rooms around a huge court, cleared by Vallois in 1912. Some trial trenches were dug here by Picard in 1923. The campaign was financed by the Académie des Inscriptions et Belles-Lettres, and was directed by the author. The result was the uncovering of an *insula*, or block, containing four houses (called A, B, C, and D), one of which was of great importance, and four shops. There were streets on three sides (north, east, and west) and to the south an alley, with walls showing the existence of other houses. The importance of the excavation is largely due to the discovery for the first time at Delos of the Rhodian peristyle, hitherto only conjectured as existing there; and of a house, containing the most complete and perfect mosaics ever found on the island. The quarter was built after the theatre, and cannot be earlier than the second century B.C. It was undoubtedly a rich quarter, as it was entirely new. Consequently, while in the quarter of the theatre, and those of the stadium and the Sacred Lake, houses with peristyles are few in number, here they seem to have been very numerous. Further excavations to the south will doubtless yield very interesting results.

The *insula* uncovered is bounded at the south

by a long alley, which connects with a great cistern, occupying the southwest corner. It is a self-contained unit; the wall of the *insula* is built of huge blocks of undressed granite, quarried from the cistern mentioned above. Granite is used, to the almost complete exclusion of marble, for thresholds, door-jambs, stylobates, and even columns. The *insula* is closed on three sides; except for the entrance to House D at the northwest corner, all openings are on the eastern street, on which Houses A, B, and C give, and all of the shops. Another peculiarity is the number of interior walls of pressed earth, particularly in Houses A and C. There is evidence that the *insula* was used, after the destruction of the houses, for miserable later constructions.

Of the streets, only that at the north was completely laid bare. It ran from the top of the *anolemma* of the theatre to the House of the Dolphins and the sanctuaries of the northwest slope of Kynthos. At this west extremity of the street, its normal width was considerably reduced by a building, perhaps a public latrine, in front of House D, and east of this, by a colonnade of four granite columns, originally covered with stucco, which was a later addition. This portico ends at a flight of steps, similar to other exterior stairways found in other streets in Delos, of which five steps are preserved; this stone stairway supported a superstructure in wood, leading to the upper storey of one of the houses. Beyond the stairway, to the east, are remains of earlier constructions. On the north side of the street are doors to three houses or shops of an *insula* not yet excavated.

The eastern street was that on which all of the houses, and shops, except House D, opened. This street has not been entirely cleared. At the northeast corner, by the intersection with the northern street, was a portico of five columns, extending the length of House A, hastily and carelessly built. It is suggested that this was the west side of a square, on which the House of the Dolphins opens.

All that was done for the western street was to clear the wall of the *insula* for its entire length, so no exact information is obtainable, except that Houses B and C drained into it. The south alley was only used to reach the large cistern at the southwest corner; at a later epoch this alley was closed by a low wall.

The four houses are next studied, beginning with House A, at the northeast corner. This house is very small and modest; it has a court, but

no peristyle, and was probably all on the ground floor, as no trace of a stairway was found, and the walls, which were of hardened earth, could not have supported any great weight. This doorway opens into a narrow vestibule; to the left of the entrance are the latrines. The vestibule leads directly to the court, which is long and narrow, ending in a covered exedra. Three rooms, two at the north, one at the south, open on the court; the northwest room and the south room have other rooms opening into them, at the west and south respectively. This northwest room was probably the *oculus*. The house drained into the eastern street. The finds from this house were unimportant.

The largest of the houses is House B, called "the House of the Masks." It is also the largest house found up to now in Delos, and has the finest, best preserved, and most interesting mosaic pavements yet uncovered. The quality of the walls and their decoration is not as good, nor as well preserved as elsewhere on the island. The entrance is in the middle of the block, on the eastern street, and was originally marked by an altar, of which the base is preserved. The jambs of the door were of granite; the lintel was not found. The door gave access to a very long, narrow vestibule, as the house occupied the entire centre of the *insula*. This vestibule is bounded by Houses A at the north and C at the south. (The house may have had an entrance, now closed, on the western street.) There was a second door at the western end of the vestibule, which opened into the peristyle court. On this vestibule, two small rooms, called *b* and *c*, opened at left and right. Their purpose is uncertain. Room *b*, on the left, has a door of its own on the street. Traces of a stairway are found here, giving direct access from the street to the second floor. The room may also have served as a porter's lodge. Room *c*, at the right of the vestibule, is very small; there is a connection, through a breach in the wall, with the southernmost room in House A. The purpose of this room is not clear.

The vestibule ended in the court (*d*), which is the largest and most regular of any found at Delos. It is almost square in shape; the centre is occupied by a rectangular peristyle, four columns to a side. This peristyle is particularly interesting as being of the "Rhodian" form, described by Vitruvius (vi, 7, 3), raised on one side. Up to now it was conjectured that it had existed at Delos in the "House of the Trident," and this is now proven to be the case. The only other definite

example known is in the "House of the Silver Wedding" at Pompeii. On the other hand, the construction of this peristyle is cheap and hasty, suggesting that the court was restored after some disaster, except that there are no sure traces of earlier building. The principal portico was at the north, with a southern exposure, and this is the side higher than the others. Its stylobate and column drums are of granite. It has been possible to re-erect the columns, showing that the corner columns had brackets, on which the epistyles of the lower colonnades (east and west) rested. These columns are carefully worked and polished, but covered with a stucco coating, as are the other columns, which are of coarser workmanship. The capitals, of the Doric order, were of white marble; only one is preserved. No corner capitals on the north were found. The stylobate of the other three sides is of breccia, as are the east and west columns, while the south columns are of poros—reused from an earlier building of the Ionic order, and very carefully covered with a fine white stucco. Seven of the eight capitals of the three lower sides have been found. All are Doric, and have slight variations, suggesting different periods. The *impluvium* inside the peristyle was paved in *opus signinum*, most of which has disappeared. There was no cistern under the *impluvium*, as the ground below was of compact granite, impossible to dig in. For the same reason there was no well; water came from the southwest cistern. The width of the more important north portico is greater than that of the others, but did not contain an *exedra*. The pavement was of beaten earth, with no trace of mosaic. The mural decoration was most simple, and consisted of plinth and orthostate patterns. This peristyle supported an upper storey, fragments from which have been found, coming either from the partition walls of rooms or from the pillars of the gallery. Of these pillars, four capitals were found. All of these fragments were of poros. It is suggested that the rooms on the north side were on a higher level than those on the other sides, and that therefore the house was higher on that side than on the others.

Room *e*, opening on the north portico from the east, is called "The Hall of the Centaurs." Its threshold is of granite, the bases of the door-jambs were of marble, the rest of the jambs, probably in rubble, revetted with marble or wood. The richness of the decoration allows the assumption that this was perhaps a state dining-room. The walls

are preserved for two metres, showing all the lower part of the decoration of plinth, orthostates, and bandeaux, above which is a frieze with torus, and a second bandeau. A number of fragments from an upper room have also been found. But the principal interest of this room is in its mosaic pavement, one of the finest known, which has been separately published (*Délos*, xiv, "Les Mosaïques de la maison des Masques"). The principal pavement is rectangular, bordered with a wave-meander pattern in black on white, and within that a ray pattern in the same colors. In this space is a central square mosaic picture, representing a figure riding on a panther and clad in a long white embroidered chiton, with red sleeves and blue shoulders, and a yellow himation. The figure wears a diadem ornamented with ivy leaves and berries, carries a thyrsos in the right hand, and a tambourine in the left. The design is one of the finest of ancient mosaic art, well composed and harmonious in color. It was obviously made in the mosaicist's studio, and brought to the house to be set in place, as is proven by the fact that it is not in axis. There is doubt as to the sex of the figure, although it surely deals with the cult of Dionysos, and may well be the youthful, effeminate type of the god, wearing the costume worn by tragic actors, and in his capacity as god of the drama. If, on the other hand, it is a woman, it can only be either Ariadne or a Maenad. On either side of this figure is a lozenge-shaped pattern, containing a galloping Centaur on a black ground, one Centaur carrying a torch, the other a kantharos. The workmanship of these figures, though spirited, is hasty and coarse, and contrasts with the beauty and delicacy of the other. The lozenges cut the white ground into eight triangles, four of which are decorated with a kind of half palmette, the other four having crowns, two of laurel and two of ivy. These crowns of foliage sacred to Dionysos and Apollo may have been placed there intentionally, and give us some indication as to the purpose of the house. Room *f*, which opens out of room *e* at the north, may be considered a serving-room, if the main room is to be called a dining-room.

The principal room to open on the north portico (room *g*) is called "The Hall of the Masks," and gives its name to the house. It is the largest room in the house, and served as the *oecus*. It is due north of the north portico, and covers the area from the east angle nearly the entire length of the portico. At the right of the entrance is a base of

black marble, to which a herm of bronze, now lost, had been attached, probably of Dionysos. The threshold and door-jambs are similar to those of the Hall of the Centaurs. The wall decoration of plinths, orthostates, and frieze, is much as usual, but the frieze composed of yellow panels, suggesting headers and stretchers, is new at Delos. Above the frieze the wall is not preserved.

The pavement of this room is conceived like a great carpet, ornamented at the two ends. The central part, a huge rectangle, is bounded by a wave-meander pattern in black on white, and consists of cubes making an optical illusion, rendered in black, white and two shades of red. This pattern occurs elsewhere on the island. At each end is a decorative pattern of five masks, connected with tendrils of ivy, with leaves and berries. These masks are obviously theatrical, and are of the New Comedy, or satyric drama. Three of them are female and seven male, of which five are bearded. The detail is sufficiently sharp to warrant their identification from the masks described by Pollux (*Onom.*, iv, 145). On the left end, from left to right, are the braggart soldier, the veiled courtesan, an unidentified male type from satyric drama, the woman with curled hair, and that type of intriguer whom Pollux calls the *Lycomedeios*. On the right end is one of the types of old men, the seduced girl, the gay father, the *leno*, and the parasite. The work is skillfully conceived, well executed, and gives a most agreeable effect. Above this room was another large hall, not less richly decorated, as is proven by remains of mosaic pavement found in the debris when clearing the room. There were also found a number of fragments of stucco from wall decorations, among which can be mentioned a number of architectural members of white stucco (Doric and Ionic colonnettes, triglyphs, dentils etc.) coming either from the upper parts of such a room, or from an *aediculum*, of which others have been found at Delos.

Next to Hall *g* is *h*, the "Hall of the Silen." This is much smaller, with a very large entrance in proportion to its size. It was not an *exedra*, for it was originally provided with a door, but rather an *oculus minor*, of which other examples have been found. Threshold and jambs are as in the other rooms described. Mural decoration is much as in the others, but the second bandeau of the frieze is of a new type. The pavement of the room is entirely of *opus tessellatum*, and has a central square design, bounded by a plain band of red; in

the interior angles are birds on a white ground. Then comes a wave-meander pattern of black on yellow (a new color combination for Delos) within which is a continuous garland of laurel and ivy of dark and light green on white, also a new motif for Delos. The central design shows at the left a nude flute-player, seated on a mound, facing the front, but with his head turned to the left, playing the double flute; at the right is a dancing silen, wearing a short bluish green tunic and a yellow himation, his left arm raised, his right hand on his hip. The design is careless and clumsy, and it is suggested that it was made by the same hand as the Centaurs in room *e*. Some of the cubes were even of wood.

Hall *i*, the "Hall of the Amphora," at the west of the north portico, exactly balances the Hall of the Centaurs, and communicates with room *j* at the south, opening on the west portico. Threshold and jambs are exactly as in the other rooms. The mural decoration is simpler than elsewhere, and shows evidence of having been done over. The pavement is of equal interest with the others, and, in form and design, is closer to that of the Hall of the Centaurs than to the others. It is a large central rectangle, bounded on the outside with a scale-pattern of black and white; then a band of wave-meander in the same colors, and inside a bead-and-reel pattern of yellow-brown on black. In the centre is a large covered amphora, against which is a palm-branch of green, and below which is a bird. On either side of the amphora are large rosettes of six petals, of many colors, separated by tendrils on which birds have perched. In front of the threshold is a design of two dolphins, which from technical grounds can surely be assigned to the same hand as those in the *impluvium*, of the House of the Dolphins, and other details point to the same conclusion, showing that they are the work of Asklepiades of Arados, who signed one of the mosaics in that house. It is suggested, therefore, that this man did the mosaics in the Hall of the Centaurs as well. There was originally a room above this, parts of the decoration of which are preserved.

Two other large rooms, *j* at the west, and *s* at the east, should be noted for their size, being quite as large as *e* and *i*, but quite devoid of decoration. At the southwest corner, a group of two small rooms, called *k* and *m*, were used for latrines, *l* being a passage leading to them; *k* may originally have been the vestibule to a west entrance to the house, later blocked up. The rooms at the south

portico were for service purposes; *n* and *o* were *cellae familiariae*, while *p* was the well of the staircase leading to the upper rooms, which was doubtless of wood, as no trace of it has been found. Adjoining *p* was a small *exedra*, *o*.

Back of these rooms was the southwest cistern, separated from them by a wall that has disappeared. This huge cistern is of an entirely different type from any previously found at Delos. It was never covered, and was the sole water supply, not only for this, but for the adjoining houses, which had the inalienable right to draw water from it. As has been shown above, it was the quarry for the building materials of the houses of the *insula*, and was then adapted for this purpose, forming a rectangular cavity, closed at the west end, where the stone had been extracted, by a wall of heavy granite blocks, to make a reservoir. It is still fed by the winter rains, and in 1930 had a water depth of 0.55 m. The normal water-level in antiquity, attested by a very clear water mark, was over 2 m. It is probable that this cistern served not merely the *insula*, but the entire neighborhood. Although the cistern could not be covered, every precaution was taken to safeguard the purity of the water it contained, by the care used in drainage, and by the isolation of the cistern as far as it was possible.

The writer then takes up the purpose of this House of the Masks, and its relation to the other important houses found at Delos. It is certainly of the same date (second century B.C.) and was occupied for a long time, as is evidenced by frequent repairs and restorations, and was finally destroyed by fire, when it was looted, or emptied of its furnishings, in a rather hasty and incomplete manner. It supplies curious contrasts—the splendor of some of its many large rooms, and at the same time the carelessness, haste, and indifference to quality shown by some of the materials of construction. The explanation would seem to be that this was not a dwelling-house, properly speaking, but the headquarters of some club or association, who wished a large house, with some important rooms, but who, through insufficient funds, had to build with poor materials. It may, on account of its proximity to the theatre, and the fact that so many of the mosaics deal with Dionysiac or theatrical subjects, have served as a place where actors could rehearse, and where costumes, masks, and other properties could be kept. The mosaics may have been the gift of a generous benefactor or choregus, on the occasion of victories in dra-

matic contests, won by the local troupe, while the Hall of the Amphora might signal a victory by a son in some athletic competition.

The finds from this house were more numerous and important than in the other houses in the block, and nearly all came from the large hall *g* (Hall of the Masks). In the other rooms were the usual lamps, fragments of common pottery, fragments of statuettes, coins, etc. Here, however, four statues were found, which it is believed were originally in the room above this. This is perhaps confirmed by the fact that the head of one of the statues (no. 1) was found in room *e*, and another piece from a room in House D. These statues are (1) of a man, draped in himation, the head in a separate piece which fits. The nose, left hand and wrist, are broken or lost; the statue is otherwise intact. Traces of a pattern remain on the himation. (2) Youth, wearing a himation on his left shoulder, and arm, rest of body nude. The head, right arm, left forearm, calf of right leg, and part of left foot are missing. The left leg has a stump support, partly hidden by the folds of the himation. (3) Seated deity on a raised throne, the feet resting on a high stool. The head, right arm, three fingers of the left hand, and the front of the right foot are lost. The whole is set on a rectangular base. The figure wears a himation draped across the lap to leave the torso entirely nude; an end of the himation falls between the knees. Of the throne, the seat and arms alone are preserved, none of the back being found. (4) Standing woman, clad in a long chiton and himation and wearing sandals. Only the base of the neck remains, the rest of the head being lost. The right arm and dowelled left hand are missing. Originally the garments were entirely gilded, but this gilding has now faded to a dead yellow. All the statues are of marble, and with them was found (5) a marble table of rectangular form, on a central square foot, with mouldings at top and bottom.

House C occupies the southeast corner of the *insula*. The entrance is at the south end of the eastern street; it has threshold and jambs of granite, and one descends by a granite step to the vestibule, which is on a lower level. This vestibule, which is almost square, is partly occupied by the latrines and the staircase to the upper storey, four steps of which are preserved. At the left of the entrance, a room opens on the vestibule; its purpose is not clear. By the staircase is the entrance to the court, which was never provided

with a door. The court is entered at its southeast corner; it has an incomplete peristyle, interrupted at the southeast by the staircase. This peristyle is square, and very carelessly and badly built. It has been possible to reconstruct four columns, three on the north portico, one at the southwest corner. Of these four columns, one is granite, one marble, and two of poros covered with stucco. These last have been reused from some earlier building. Two Doric capitals of poros were found, but cannot be put in place on the columns, the intervening drums being lost. The northeast column of the peristyle, which is a monolith of marble, was also the middle support of the lintel of the entrance to the exedra, as well as of the epistyle of the north portico—an arrangement not hitherto found at Delos. These entablatures were superimposed, the lintel of the exedra resting directly on the column, and carrying the epistyle of the portico. The *impluvium* was paved in *opus signinum*; its bottom sloped to the east, and was emptied by a drain passing under the vestibule to the eastern street.

Opening on the north portico at the east is the exedra. That part of the entrance which gives directly on the *impluvium* is partly closed by a low wall. No trace of pavement remains. The walls show traces of two periods of decoration. There is no evidence for any room over this; the contrary is suggested by the presence of numerous roof-tiles in the débris. Into the exedra opens a small room to the north, also unpaved, but with traces of wall decoration, which has a door on its west wall, leading to the *oculus*, which also opens directly into the north portico. This *oculus* is very large, and covers the entire side of the portico. It is paved with little pebbles of terracotta, covered with cement—a pavement not common, but not unknown. There is evidence that the walls were repainted, although only the lower part remains. On the west portico is another large room, unpaved and devoid of decoration, probably a store-room for provisions, since a number of large amphorae, some of them intact, were found here. In the west wall of this room, there was originally a door, later walled in, which opened on the southwest cistern. There was originally a richly decorated room above this; parts of its mosaic pavement were found in the débris. Into this store-room opens a smaller room, likewise unpaved and devoid of decoration, with no other door, probably for additional storage space.

On the south portico are two other rooms, only

one of which opens directly on the portico. It also originally opened on the south alley, but this door was walled up, and a lime-burner's basin put at that point at a later period. This room has no pavement or mural decoration, but is separated from the adjoining room by a type of wall new at Delos, composed, at a height of 51 cm. from the ground, of horizontal courses of terracotta bricks held together by a lime mortar. A narrow door at the east pierced this wall, opening into the next room, the bathroom. This has a tile pavement covered with cement; in the southeast corner is the bathing-place, shaped like a sabot; its exterior is covered with cement, and in the bottom is set a large marble basin. The drainage from all the rooms but the *impluvium* was conducted through a long conduit to the western street.

House D, at the northwest corner of the *insula*, offers some problems. We have seen that at the point of its entrance latrines had been unskillfully built into the street. All the rooms in this house had doors with heavy thresholds, provided with holes for vertical bolts, showing that every room could be carefully closed. The suggestion is made that this was a warehouse converted into a residence. The entrance, at the west end of the northern street, opens directly into the court, which was originally square, but from which at the southwest a small room had been made. Part of this court was covered, as is proven by two monolithic columns, one of which is intact, which undoubtedly supported a pitched shelter, covering the whole side of the entrance. The whole court is paved with stone. The room on the court is divided from it by a thin partition of bricks of a type new to Delos. The other rooms of the house are grouped in pairs at the south and east. The south rooms are devoid of character; the east rooms are more interesting. That opening on the court seems to have served as the *oculus*. The mural decoration here is of a new type, in that there are no orthostates, the frieze resting directly on a high plinth. No finds of any interest were found in this house.

All of the shops are on the eastern street, between the north corner and the entrance to the House of the Masks. None of them have any indication of their occupant's businesses. At the north corner is a large shop, which originally had access to House A by a door which has been walled in. The southernmost shop was originally connected by a door to the vestibule of the House of the Masks; but that, too, has been walled in. No

important discoveries were made in any of these shops.

Ithaca: L.H. III, Protogeometric Cairns at Aetos.—In *B.S.A.*, xxxiii, 1932-1933, pp. 22-65, W. A. HEURTLEY and H. L. LORIMER describe a number of cairns and the objects found in and near them at the summit of the saddle between Mt. Aetos and Mt. Merovigli on the island of Ithaca. Mr. Heurtley contributes an introductory note describing the site, Miss Lorimer the description of the cairns and of a pavement laid "not much after 700 B.C.," Mr. Heurtley the inventory and conclusions. Of the cairns so little remains that they were at first hardly recognized. There is no hard-baked earth as from cremation, but the greasy black earth found in them may have been due to corpses burned (like that of Patroclus) with much fat and carcasses of animals. No bones certainly identifiable as human were found. The inventory lists 103 wheel-made vases or fragments, 11 hand-made vases, one terracotta figurine (probably imported Mycenaean), a bronze pin, six discs and a ring of a whitish substance. The wheel-made pottery "forms a consistent, but not uniform group; that is to say, the passage from a pure Mycenaean (L.H. III) phase to full Proto-geometric can be observed within it." "The Proto-geometric at Aetos follows directly upon the Mycenaean and develops out of it." The lower chronological limit of the group is probably somewhat before 850 B.C. The hand-made vases seem to be belated products of the pre-Mycenaean civilization of Ithaca.

The Ithaca of the Odyssey.—In *B.S.A.* xxxiii, 1932-1933, pp. 1-21, LORD RENNELL discusses the ancient literary evidence and the modern theories concerning the position and topography of the Ithaca of the Odyssey. He concludes that the only island which conforms to the statements contained in the Odyssey is that which bears traditionally the name of Ithaca (Thiaki). The hill of Pelicata, near the modern village of Stavros, in the northern half of the island, yielded ample evidence (chiefly Early Helladic, Minyan, and Mycenaean pottery) of occupation before, but not after, about 1200 B.C. The settlement would, therefore, have been only a tradition at the date usually assigned to Homer. The house of Odysseus seems to have been thought of as on the slope of Mt. Exogi, a little to the northwest of Pelicata. This article is called an introductory note, to be followed by reports of the excavations carried on at Ithaca by the British.

SCULPTURE

Silanion.—E. SCHMIDT publishes the second part of his study, interpreting the literary evidence in the light of existing sculptures (*Jb. Arch.* I. xlix, 1934, pp. 180-204; cf. *A.J.A.* xxxvii, 1933, p. 616). The newly discovered portraits of Plato in Berlin and Athens confirm the superiority of the Holkham head to other copies. Silanion worked only in bronze; was an Athenian citizen, but not a typical Attic sculptor, perhaps born in Megara; devised a system of proportions, making the legs long for the torso; was simple, even reactionary and classicistic, in his rendering of form and drapery; showed rhythmic movement in the hair; was a pioneer in individual portraiture. He was born about 390 and made a statue of the athlete Satyros about 335; Pliny's *floruit*, 328-25, is wrong as frequently, and the Milesian inscription is not contemporary. The familiar bronze head of a boxer, found at Olympia, may well be his Satyros.

TERRACOTTAS

A Terracotta Kore.—An archaic Greek terracotta statuette has recently been acquired by the Boston Museum of Fine Arts. It is published in the *Bulletin of the Museum*, xxxiii, August 1935, pp. 49-51. It is the figure of a woman wearing a long Ionic chiton and himation, and holding a dove in her right hand. Her hair falls in curls down her back. The height of the statuette, including the plinth, is 21 cm. It is the same type of figure as the marble "Aphrodite of Lyons."

Laconian Terracottas of the Dedalic Style.—In *B.S.A.* xxxiii, 1932-1933, pp. 66-79, R. J. H. JENKINS describes and discusses, with numerous illustrations, Laconian terracotta heads of the Dedalic style which occupied "between sixty and seventy years in the middle of the seventh century" and was "at its most characteristic about the years 655-645." Two methods of decoration were used side by side but never confused. "The first consists in painting the face with a thick cream slip and the hair and eyes with black lustrous paint; the second on leaving the face unpainted . . . and coating the hair with a light red wash." The faces of these heads, whether Proto-, Early, Middle, or Late Dedalic, have a narrow chin, large eyes, and a heavy fringe of hair across the forehead. The progress of the style is traced and its affinities with contemporary productions of other places, as Crete, Corinth, and Argos pointed out.

VASES

Another Signed 'Droop Cup'.—To the two Droop cups signed by Antidoros ('Αντίδορος ἐποίησε, *J.H.S.* lii, p. 67; *A.J.A.* xxxvi, 1932, p. 541) may be added one by Nikosthenes in the British Museum, of which only the foot is preserved. The signature (Νικοσθένης ἐποίησεν) has the same unusual position as the other two, on the inner edge of the underside of the foot. It confirms Ure's suggestion of an affinity between the Droop cups as a class and the products of Nikosthenes' workshop. (*J. D. BEAZLEY, J.H.S.* lv, 1935, p. 81.)

A Skyphos by the Pan Painter.—A r.f. skyphos (provenance unknown) which has been in the Museum at Wisbech, England, since 1836 is clearly identified by its style as a work of Beazley's Pan-Painter. A warrior armed with a spear is crouching as in ambush, on the obverse, and an archer discharging an arrow, on the reverse, but they are both turned to the left, following instead of facing each other. Parts of the design have a relief contour. The spearman wears an embroidered loin-cloth of heavy material and a Corinthian helmet with horsehair crest; the archer, a large part of whose figure is missing, wears a similar loin-cloth and a cap and carries a quiver and a bow of Asiatic form. This vase compares very favorably with the other known small works of this artist; the figure of the crouching spearman in particular, with its expression of vitality and potential force, being a masterpiece of compact design. (*M. ROBERTSON, J.H.S.* lv, 1935, pp. 67-70.)

NUMISMATICS

A Syracusan Dekadrachm.—A new Damareteion has recently been acquired by the Museum of Fine Arts, Boston. It is the fourteenth specimen known of the famous series of coins which were struck in commemoration of the victory over the Carthaginians at Himera in 480 B.C. The acquisition of this coin fills an important place in the series of Syracusan coins possessed by the Museum. It is published briefly, with excellent illustrations in the *Bulletin of the Museum of Fine Arts*, xxxiii, August 1935, pp. 51-52.

INSCRIPTIONS

Attic Inscriptions of the Fifth Century B.C.—In *B.S.A.* xxxiii, 1932-1933, pp. 101-135, H. T. WADE-GERY discusses several Attic inscriptions. In the great *Lapis Primus*, which contains the

quota lists from 454/3 to 440/39, the position of two small groups of fragments (Meritt's Groups I and III, *A.J.A.* xxxiii, p. 6) has not been definitely established. By careful count of lines between fragments and use of "horizontal equations" (i.e., instances of certainty that two stones contain parts of the same line), new positions are determined for the fragments in question. The new fragment of *S.E.G.* v, 7 is in the same hand as a hitherto unpublished fragment (No. 4642a) in the Epigraphic Museum at Athens and makes a perfect join with it. The two contain a summation of *S.E.G.* v, 1 (the list of 454/3), placed on the side face of the stone. The inscriber of 453/2 used the side face for further columns of names. All subsequent inscribers use only the face on which they write their prescript. The list of 453/2 has ten columns of a normal (though not uniform) length of 17 (or 19 if McGregor's reading is correct) lines, a total of about 163 (or about 181) lines. Several new readings are proposed. On faces A and B of the *Lapis Primus* there were only seven lists. One list is wanting. It is proposed to put the blank year in 449/8; *S.E.G.* v, 8 in 448/7; and *S.E.G.* v, 6 in 447/6. The Peace of Kallias would thus fall in the winter of 450/49. A facsimile of the upper part of the *Lapis Primus* is given.

The Charter of the Democracy (*I.G.* I², 114) has 66 letters in a line. A hitherto unpublished fragment, with *I.G.* I², 49c previously assigned to this inscription by Wilhelm, shows that there was an uninscribed margin at each side. Lines 27-28 contain part of the Bouleutic Oath. Fragments of that oath preserved in literature are assembled. Perhaps part of the oath was omitted on the stone. A facsimile of the whole inscription and a transcript of most of it, with some new readings and supplements, are given.

In many Attic inscriptions the straight strokes are cut with the whole width of the chisel, and therefore the widths of the chisel can be measured. One cutter who uses three chisels is absolutely regular in his practice. He is the cutter of *I.G.* I², 77, of three fragments from Eleusis, of *I.G.* I², 185 (which probably belongs with the fragments from Eleusis), of *I.G.* I², 160, and of *I.G.* I², 61, 169, and 179 (three fragments which belong together). The first is the decree giving a list of those qualified to have meals in the prytaneion. For this a date in peace time rather than in the Archidamian War is preferred. The proposer's name is probably Perikles. Palaos is right in saying that the inscription of which the three Eleusis frag-

ments form a part had a line of 50 letters or more and belongs to the outbreak of the Archidamian War. It is a decree of the Boule and the Demos regulating matters at Eleusis. A transcript, with restorations, is given. The fragments *I.G. I²*, 179, 169, and 61 belong together in that order. The prescript will bear restoration giving the same date as *I.G. I²*, 91-92, in the autumn of 434 B.C. At any rate the date must be in the late thirties. Hands similar to this are *I.G. I²*, 318 and two pieces which belong with it, and, though much less close, *I.G. I²*, 75 and 96.

In an appendix, pp. 135 ff., MALCOLM F. MCGREGOR adds a note on new readings in the *Lapis Primus*. The height of the stele is decreased 0.36 m. This results in several new alignments. The details of changes so caused are to be discussed in a later publication.

Notes on Delphian Chronology.—GEORGES DAUX, in *B.C.H.* lvii, 1933, pp. 68-97, discusses eight different points: 1. A new archon of the third century; here he publishes a stone found in 1904, containing three texts, one of which gives a name to be restored as Melision, to be dated somewhere between 285 and 265. 2. He proves that the archons Archelaos I and Aristion I must have succeeded each other immediately, some time in the third century, date not specified by the author exactly. 3. The question of the semi-annual and annual bouleutai. The article *Delphoi*, in *Pauly-Wissowa*, vol. iv, has thrown the problem into greater obscurity, as the figures given arbitrarily by Pomtow have been accepted. Only one archon is here discussed, Kleodamos the son of Kleon, whose date was given by Colin as 94 B.C. But the chronology between 139/8 and 49/8—ninety years—has not been definitely established, although at least seventy-four names of archons are known. By a series of steps, Daux believes that the bouleutai were appointed for one year as early as 91/90, and probably earlier, by 100 B.C. The semi-annual appointments last at least as far as 108/07. Kleodamos is dated as archon in 102/01. 4. King Nicomedes III and Queen Laodice. Daux comments on an inscription referring to this royal pair, and to the researches of Th. Reinach on this subject, taking issue with him on various points, and offering a solution of his own. He gives a date of 102/01 as a possibility for the inscription. 5. Ammonios, priest of Apollo at Delos. He comments on an inscription (*Fouilles de Delphes*, iii, 1,228) and dates this priesthood at 103/02, following Dinsmoor's chronology, which

he accepts, while the inscription itself belongs to the following year (102/01). 6. The Athenian Pythais of 98/7 (archonship of Mentor). Here Daux follows Dinsmoor again (with some reservations) in assigning this date to the archon. 7. The two archons named Eukleidas. These archons were Eukleidas the son of Kalleidas, who held office in the ninth Priestship, and Eukleidas the son of Herakleidas, who was in the twelfth Priestship, somewhere near 103/02. 8. The archon Babylos, son of Andromenes. His archonship was in the eleventh Priestship; the name is known from an inscription, here commented on for the first time. The date of 110/09 is suggested. The article ends with a summary of the results believed to be absolutely established, while a postscript deals with a recent article by Stählin on the Thessalian Lists of Generals.

ITALY

GENERAL AND MISCELLANEOUS

Cervetri.—The famous archaic Etruscan terracotta sarcophagus from Cervetri acquired for the British Museum in 1873 and exhibited since that time (Murray, *Terracotta Sarcophagi in the British Museum*, pl. ix), according to the British Associate Press has been branded a forgery of Penelli by Mr. Forsdyke of the British Museum and withdrawn from view. The couches of two similar large sarcophagi from the same place in the Louvre and in the Museo di Villa Giulia resemble Greek models, but the example in the British Museum is decorated with suspicious reliefs and the couch has no parallel in Greek or Etruscan couches.

Arezzo.—MINTO discusses various finds in the neighborhood of the church of San Lorenzo; ancient vaulting and two wells under the church, remains of walls and a mosaic pavement of a private house. In the house were found pottery fragments of Etrusco-Roman period and a number of good bronzes; there was a Lar, a pair of identical dancing girls, a Mercury, a Jupiter, a woman, a Roman pontifex, and a handsome candelabrum. (*Not. Scav.*, X, 1934, pp. 47-59.)

Castiglion del Lago.—An Etruscan chamber tomb found in Castellaro is described by MINTO. It contained three square urns, all inscribed and decorated with reliefs; one of the reliefs depicts a Scylla, Venus (?), and a Cupid. Also found were numerous lesser antiquities of metal or terracotta. (*Ibid.*, pp. 59-64.)

Cirò.—GALLI records the finding of six fine axe-heads of bronze. They were stacked in pairs,

each pair crosswise of the last. Belonging to the first iron age, they are important especially because such remains are very scarce in Magna Graecia. (*Ibid.*, pp. 175-176.)

Fianona.—DEGRASSI outlines the history and importance of Fianona and describes an altar of Vesta found there in 1930-31. A Roman town stood where the altar, other antiquities and several inscriptions of *C.I.L.* iii were found. The prehistoric settlement had occupied the same site, where Fianona Castello stands today. Commercial interests and Roman peace led under the Empire to the rise of a lower town also, nearer the sea, at Fianona Porto, where were found in 1925 numerous architectural, sculptural and epigraphical remains. An epigraphical fragment found in 1928 almost certainly names Fianona. (*Ibid.*, pp. 3-9.)

Littoria.—JACOPI reports a portrait head of Domitian oak-wreathed. The emperor is represented at the age of about thirty-five years. The importance of the find is enhanced by the paucity of portraits of Domitian, due presumably to *damnatio memoriae*. (*Ibid.*, pp. 106-108.)

Melendugno.—Tombs found at Roca have yielded antiquities of various periods, prehistoric, fifth to third centuries notably, and later. BERNARDINI lists and briefly describes some two score vases, two very beautiful gold *fibulae* decorated with lions, a few bronze vessels, nails of bronze and iron, coins of Panormus, Corinth, Tarentum, Brundisium, Romano-Campanian didrachm, a Caecilian denarius, coins of Augustus, Hadrian, and mediaeval examples. (*Ibid.*, pp. 182-199.)

Monfalcone.—DEGRASSI reports the finding of stone blocks which formed part of a bridge built or repaired by Legio XIII Gemina under Augustus. The bridge was part of the road Trieste-Aquileia-Fiume. An *as* of the period 217-151 B.C. with marine incrustation found nearby affords evidence of the whereabouts of the ancient coast-line. (*Ibid.*, pp. 9-11.)

Montecatini in Val di Cecina.—MINGAZZINI describes tombs and antiquities found near the tomb reported by the same writer in *Studi Etruschi*, viii, pp. 59-75. Eight graves were of Villanovan type. A large urn, broken and now lost, contained eleven fine *fibulae* of various sizes and decorations. Of the second only two pieces of the urn's cover are preserved; from the third the urn with its cover and a serpentine *fibula*. Three graves yielded fragments of urns decorated with varieties of a meander pattern, a *fibula*, a pend-

ant, and a nail-head. The seventh urn could not be reconstructed; it contained three *fibulae* and a spindle-rach. The urn of the eighth grave was too broken to restore; there were a leaden wheel-shaped head for a hairpin, two *fibulae*, and three bronze wire rings. The burials are to be dated probably toward the middle of the seventh century or a little later. Also recorded is a rectangular chamber tomb from which came remains of something over a score of vases, a little alabaster, a few fragments of bronze, iron, bone, and stone. The datable remains belong to the sixth and fourth centuries. Found on the same site was a rather rare type of urn supported by a low column. (*Ibid.*, pp. 27-39.)

Orte.—POLLOTTINO reports the finding of a Roman grave of about the third century, which contained a Domitianic sesterce, two *asses* of Trajan and an *as* apparently of Julia Mamaea; also an Etruscan tomb of fourth to third century composed of five large blocks of peperino and inscribed with an epitaph. (*Ibid.*, pp. 144-145.)

Orvieto.—MINTO contributes several articles on finds at Orvieto. The first and longest deals with the area of the Etruscan temple. There are enumerated in long lists antiquities of terracotta, bronze, iron, etc., found during the campaign of 1930/31 and the two campaigns of 1931/32. Progress in the excavation of the temple and the area in recent years is described. Minto discusses architectural fragments, a terracotta antefix, an inscribed base for a small votive bronze, a bronze dancing maenad, numerous vase fragments of various styles and periods—one with Ajax, Cassandra nude and Athena, one with a nude ephebe, another showing a Silenus, still another a Silenus pursuing a maenad. Finally there is an enumeration of numerous fictile fragments inscribed with one or more letters, and a piece of terracotta with part of a relief of Mercury (wearing a *petasos*) and a Nymph. For all these remains chronological data are still to be sought by comparative study, for stratification was destroyed by modern building operations.

The second article describes a stretch of ancient roadway and objects found together with it indicative of cult-buildings nearby—remains of terracotta statuary, including a female head; fragments of acroteria and antefixes, including an archaic Ionic maenad with traces of color, pieces of terracotta reliefs and the like.

Also reported are two chamber tombs, one at La Castagneta, the other at Torre San Severo,

together with their funeral furnishings. (*Ibid.*, pp. 67-99.)

The Orvieto report is concluded by BRANZANI's account of the finding of structural remains of the fifth or sixth century under the Church of San Michele Arcangelo, confirming the legend that the site had been employed for pagan worship. (*Ibid.*, p. 100.)

Ozzano.—AURIGEMMA describes the mosaics of Claterna excavated in 1898, briefly published in the *Not. Scav.*, of that year, covered up and almost forgotten, and now again excavated. One is gilded and two geometric, all of the finest technique and great artistic worth. Epigraphical evidence is presented of a brick factory owned by the *gens Ceronia* in the neighborhood of Bologna in the first century. Also described are a small bronze of a barbarian cavalrman on a galloping horse, the handle of a bronze pitcher, a sesterce of 12 B.C., and an *antoninianus* of A.D. 230. (*Ibid.*, pp. 12-21.)

Palestrina.—JACOPI describes two white marble heads, portraits of unknown men, the first head being assigned to the early decades of the first century, the other to the Trajanic period. (*Ibid.*, pp. 104-106.)

Riparbella.—Two Etruscan chamber tombs have been found in the district of Torricella and are described by MINGAZZINI. Both are very imperfectly preserved, but the presence of Etruscan tombs in this territory is an important discovery. (*Ibid.*, pp. 25-27.)

Rome.—A gray granite head from a male statue in Egyptian style was found in 1930 under the Direzione Generale delle Poste e Telegrafi. It came from the area of the temple of Isis and Serapis. It belongs, according to POLLOTTINO, to the Ptolemaic period. (*Ibid.*, pp. 101-103.)—GATTI reports the finding in the Via Quattro Fontane of a piece of wall belonging to a building found in 1930, shortly to be published; some remains in the Piazza S. Bernardo of construction in *opus reticulatum* belonging to imperial buildings which flanked the Vicus Portae Collinae on the side toward Diocletian's baths. He also records some small remains of Domitian's stadium in the corner of the Circo Agonale and the Corsia Agonale; also remains under the Via della Dogana Vecchia of a corner of the south room belonging to the baths of Alexander, together with drainage pipes and numerous bricks bearing stamps of the time of Commodus and the Severi. (*Ibid.*, pp. 150-151.)—PIETROGRANDE discusses the partial

excavation at the fifteenth-mile stone of the Via di Decima of a piece of wall of the late Republican period; a large sepulchral building which has yielded three sarcophagi, one dated to the fourth century; a grave covered with tiles, one of which bears the Constantinian monogram and the *sigle* X M T. The first sarcophagus is decorated with reliefs of Cupids and Youths, and a representation of the story of Daniel and the Babylonian dragon, in which Christ also appears; the second has an *imago clipeata* of the deceased. (*Ibid.*, pp. 155-168.)

S. Anna di Alfaedo.—BATTAGLIA contributes a lengthy article on excavations on that section of Monte Loffa called locally Castegion, occupied in prehistoric times by a Veneto-Gallic settlement. A wall along the north side of the settlement, formed of stone slabs set vertically, a semi-subterranean hut similarly constructed in the northeast corner of the site, and stone paved terraces along the west side of Castegion are described. Near the wall was found an animal head *fibula*, rare in this district. In the hut were found numerous perforated stone pyramids and other prehistoric objects of bone, metal, and stone; similar antiquities were found in two passages, one of which connected the other with the hut. The terraces, three in number, were connected with each other by stairways. Castegion contains only one archaeological stratum which Battaglia assigns to the second iron age. Ceramic remains are common, but domestic utensils and ornaments very few; knife, ploughshare, axes, etc., of the La Tène II and III periods, amber and glass beads and an iron *fibula* of La Tène III, a number of *fibulae* of the same and earlier date. The buildings of Monte Loffa are contemporary with the semi-subterranean huts of Bostel di Rotzo. The hut has no sign of hearth, nor do objects found in it show any effects of fire; it was therefore probably not a dwelling. The stone pyramids seem to have been ritual or symbolic objects. Also found in the hut were several weights, one a stylized ram's head. Nor do the terraces show any signs of habitation; they, too, seem to have served some cult purpose. Flint seems not to have been in use on the site in the second iron age. (*Ibid.*, pp. 116-143.)

ROMAN SCULPTURE

Portrait Statue.—AZIZ OGAN publishes a bronze statue, 2.07 m. high, found in 30 or 40 fragments and put together in the Istanbul museum. The bearded man, clad in chiton and himation, could

be Antoninus Pius or a native prince. (*Arch. Anz.*, 1934, pp. 411-416.)

POTTERY

Early Paestan Pottery.—The various provincial and local wares which developed after about 380 B.C. from the earlier South Italian pottery have not yet been systematically studied. A contribution by A. D. TRENDALL treats the early ware of Paestum for the period 365-340, down to the time of Asteas, the best-known individual painter of Paestum, and deals with twenty or more vases which are now in Italian or other European museums. Favorite shapes are the kalix and bell kraters, characterized by straight sides and square pictures framed between upright borders or palmette designs. Dionysiac scenes predominate, Eros often appearing among the maenads and satyrs. The reverse usually has two standing figures facing each other and rather carelessly finished, but the obverse often shows groups of three or more figures, both seated and standing and often on more than one level. In one of the conversation scenes is a dwarf labelled $\Sigma\text{IK}\Omega\text{N}$, recalling the slave-name in Aristophanes' *Ecclesiazousae*, 867. In the later work the draperies tend to become less natural and the faces heavier and more lifeless, but the drawings show good proportions and knowledge of the nude. The early work of Asteas belongs in the decade 350-340, and his tradition was carried on by Python until the period of decadence set in at the end of the century. (*J.H.S.* lv, 1935, pp. 35-55.)

NUMISMATICS

Carthaginian Bronze Coins.—In *Not. Scav.* x, 1934, pp. 200-204, TARAMELLI reports the discovery at Bultei in Sardinia of a hoard of Carthaginian bronze coins, 292 specimens of thirty different types.

ARABIA

Nabataean Temple.—Further evidence of the penetration of Hellenic influences into north Arabia is provided by the temple excavated at Djebel Ramm, which yielded an altar engraved with a broken Latin inscription, a coin of Marcus Aurelius, a statue representing a seated figure clothed in flowing robes (although only the lower part remains and that in a badly mutilated condition), and a few Greek graffiti. Certain structural and decorative features, such as the use of brightly colored stucco, the almost total embedding of the

columns in the walls, the employment of wooden beams in the foundations to act as shock absorbers in case of earthquake, link the edifice architecturally with buildings at Petra, particularly the *Qasr-el-Bint*. The presence of more than one altar suggests a dedication to more than one deity. Besides numerous Nabataean graffiti, there are a few Thamudic and Arabic which seem to date from a period subsequent to the abandonment of the sanctuary. (R. P. SAVIGNAC and G. HORSFIELD in *R.B.* xlv, 1935, pp. 244-278.)

AUSTRIA

Avaric Finds.—In *Mittel. Anthr. Ges. Wien*, lkv, 1-2, 1935, pp. 1-38, J. CASPART presents a preliminary report on 211 graves excavated in the extensive cemetery at Zillingtal in Burgenland. The graves are of the flat variety, with elongated, rectangular pits, more or less aligned in irregular rows. The burials are uniformly skeletal, extended, and placed on the back, oriented NNW-SSE. Contracted position, on the right side, is exceptional. The furniture contains: pottery vessels with indented or incised design (including the multiple wavy line motif), as a rule situated near the feet; ceramic spindle whorls and disks; axes, swords, knife blades, arrow heads, and strike-a-lights, all of iron; bronze pieces, such as buckles, girdle plates and pendants, bracelets, finger rings, temple rings (i.e., Schläfenringe), some with traces of superficial silver applications; Roman copper coins, pierced for suspension; egg shells and bones of poultry, and bones of cattle, sheep, goats. The site is dated from the advanced sixth century to the early ninth century and is considered to be wholly Avaric. The closest analogies are to be seen in the cemetery at Kesthely (Hungary). While the study of the skeletal material is not yet complete it is evident that there is no uniformity in the racial element.

In the same issue (pp. 39-43), L. NISCHER-FALKENHOF describes the furniture from two skeletal graves found at Margarethen am Moos, similar to that of Zillingtal. The cast bronze pieces are considered direct Asiatic imports, while the pressed specimens are interpreted as indications of Byzantine influences. The finds are dated as of the eighth century.

Finds from Guntramsdorf.—In *Mittel. Anthr. Ges. Wien*, xlv, 3-4, 1935, pp. 158-168, R. PITTIONI and E. WURTH describe sundry archaeological materials found at Guntramsdorf (near Wiener Neustadt) and recently catalogued and installed

by them in the local museum. Among the Neolithic remains are represented the Incised, Lengyel, Baden, and Corded pottery phases. The Bronze Age is indicated by comparisons with the Aunjetitz (Br. A. I) and Lausitz (Br. A. III) developments. The Iron Age is documented by a few sherds of the Hallstatt phase and two graves (one skeletal and one cinerary) as well as varied stray finds of the La Tène phase. Of particular significance seem to be the Corded ceramics consisting of six vessels said to represent perhaps a cache in a hut foundation (?). The cord-impressed decoration corresponds to the typical embellishment common to the Central German Corded ware. The authors advance the opinion that the Corded pottery of Burgenland coexisted with the Baden and Bell Beaker groups, that it belongs to the Late Neolithic stage, and that it persisted into the Early Bronze Age.

CZECHOSLOVAKIA

Cinerary Urn Graves at Krepenice.—In *Bull. Amer. Sch. Preh. Res.* xi, 1935, pp. 31–42, J. BOHM and V. J. FEWKES present a report on the flat cinerary urn field at Křepence near Sedlčany, South Bohemia. The site was excavated by the State Archaeological Institute of Czechoslovakia and the American School of Prehistoric Research during the season of 1933. Twenty-three graves were found thus far and general indications point to the presence of an extensive cemetery which is to be further explored in the future. The burials appear in urns, accompanied by small vessels, and sometimes with bronze artifacts, such as bracelets, pins, and rings. The ossuary usually rests within a pit large enough to accommodate its tapering base, with additional vessels placed upon, in, or around it, the whole forming a compact nest. The graves are set in fairly regular rows, and are sometimes covered by stones. On the basis of ceramic characteristics as well as the bronze pins, the site belongs to the late Bohemian Bronze Age and may be placed as contemporary with the local Silesian (i.e. post-Lausitz) phase. There are, furthermore, analogies with the so-called Knovíz and Milaveč expressions. The chronological position of the site corresponds to the Hallstatt A-B designation in Reinecke's scheme.

Explorations in Czechoslovakia and Jugoslavia, 1934.—V. J. FEWKES (*ibid.*, pp. 7–30) writes about the activities of the summer course of the School in Europe, which was again under his direction. General theoretical studies were sup-

plemented by an extended museum tour through Central Europe. There followed practical reconnoitering in Eastern Yugoslavia during which several new sites were recorded. Outstanding among these is the Neolithic settlement near Prokuplje which shows close analogies with Starčevo. The visits to sites previously excavated or now under exploration afforded acquaintance with varied circumstances, nature of deposits, and methodology. Physiographic and ethnographic factors were noted throughout the trip. One month was devoted to excavations in Czechoslovakia in coöperation with the State Archaeological Institute, during which many phases of local prehistory were revealed, and several new contributions were made. The course also included laboratory practice in Prague. During the seventy-eight days of the term's duration twenty-eight collections were studied, over forty sites were visited, and excavations were carried on in five localities. The report includes a full description of the field work, stating the significance of the individual finds which are to be published in full when the material and observations are properly analyzed.

JUGOSLAVIA

Neolithic Cemetery at Botoš.—In *Starinar*, 3rd ser., viii–ix, 1933–1934, pp. 40–58, M. GRBIĆ describes ten contracted skeletal graves of the Neolithic Age excavated near Veliki Bečkerek in the Jugoslavian Banat. The placement of the burials was either on the left or the right side, and the predominant orientation was east to west. Furniture was found only in three instances: one polished celt of slate in grave no. 4, and one pottery vessel in no. 6 and no. 9 respectively. The site, resting upon a loose foundation, is now being exploited for brick clay. Consequently, the deposits suffer considerable damage and certain portions are being completely destroyed. Two stray skulls discovered in close proximity to the walls of a modern clay pit indicate the recent fate of other graves. In the deposits overlying the grave niveau several polished slate celts, sherds, and animal bones were collected. The lithic and ceramic pieces are of the same character as those found *in situ* within the grave pits. The author compares this material with the typical celts and ware at Aradac and Vinča. The fragmentary skeletal remains were discarded unrecorded. Surface material collected in fields between the cemetery site and the village of Botoš suggests the

possible presence of a settlement. In addition to the Neolithic burials one grave with extended skeleton, accompanied by bronze artifacts, was discovered. Its date is given as of the transition from the second to the third century, and the find is labeled as Barbaric-Roman. (The author's statement that the cemetery at Botoš represents the first instance of Neolithic contracted burials in Yugoslavia is certainly not in agreement with the Starčevo finds. These partially preceded the work at Botoš, and were published in May, 1933.)

Interpretation and Dating of Vinča.—In *Proc. Amer. Philos. Soc.* lxxix, 1935, pp. 651-672, V. J. FEWKES reviews the status of the well-known Danubian site near Belgrade. The author tabulates the chief interpretations advanced by its excavator (Vasić) which range from the correct initial recognition of the Neolithic Age to his most recent and radical declaration that Vinča was founded as an Ionian colony in the sixth century. The 10.5 m. of Vinča's deposits represent débris of superimposed settlements the greater portion of which (vertically viewed) shows an unmistakably Neolithic character. This view finds general acceptance among the students of Danubian prehistory, whereas the untenable stand of Vasić remains unsupported and unproved. Childe and others recognize two Neolithic phases at Vinča. Although this division is arbitrary and ambiguous, it may be tentatively retained, for it provides a provisional classificatory basis. Neolithic settlement sites with material remains closely paralleling those of Vinča exist throughout the Moravo-Danubian area. Fewkes lists a score of such instances between Belgrade and the headwaters of the Morava. The total evidence now available shows that this area is an integral part of the Danubian Neolithic development which represents a complex derived from outside sources—perhaps from regions lying eastward of the Eurasiatic straits. The Yugoslav sites distributed southward of Vinča suggest that within this area the primary diffusional force came from the direction of the Danube. Whether or not Vinča was the actual cultural centre of the Moravo-Danubian expression is not yet clear. However, it seems that locally this unique site reflects the highest cultural

achievement of the Neolithic Age in Central Europe. (The article includes a selected bibliography.)

CHRISTIAN, BYZANTINE AND MEDIAEVAL GREECE

The Date of H. Theodori at Athens.—In *B.S.A.* xxxiii, 1932-1933, pp. 163-169, H. MEGAW discusses the date of the church of H. Theodori at Athens, reaching the conclusion that the first church was built about A.D. 900, that it was probably repaired in 1049, the date of the smaller inscription, and that the present church was built by Kalomalos about 1070.

Byzantine Architecture in Mani.—In *B.S.A.* xxxiii, 1932-1933, pp. 137-162, H. MEGAW describes primitive chapels, six Middle Byzantine domed churches in Mani, and the Middle Byzantine vaulted church of H. Ioannes at Pyrgos. He discusses briefly the paintings in H. Strategos at Ano Eoularios, and the inscriptions in the churches Taxiarchai at Glezon and Karouda. A list of twenty-three churches arranged chronologically from about A.D. 900 to A.D. 1250 or later is appended. Mani, in southern Peloponnese, was architecturally a separate entity, provincial and conservative, and it was from this province rather than from the chief centres in Greece, that the builders of Mistra drew their inspiration. The churches of Mani develop from the simple basilica to the complex tetrastyle cruciform.

TURKEY

Church of SS. Karpos and Papylos in Istanbul.—The substructure of this church, which St. Helena is said to have built in imitation of the "church of the tomb" at Jerusalem, is found by A. M. SCHNEIDER in a building in Istanbul, of which he publishes a drawing and description (*Arch. Anz.*, 1934, pp. 416-418). It has recently been used for the storage of charcoal and straw. There is a domed room, 7.5 m. high and 12.2 m. in diameter, with a bema and apse added at the east; surrounding the domed room is a corridor 2.2 m. wide. This is evidently the substructure for a round building with an inner circle of columns.

NEWS ITEMS FROM ATHENS

In the course of the past year the Greek islands, both east and west, have been the scene of considerable excavation and noteworthy finds.

The Cave of Arkalochori, or "Badger Village," in Crete, continued to produce vast numbers of votive bronze double-axes, culminating in the discovery of one which bears an incised inscription in three vertical lines. The text consists of fifteen signs, six in each of the first two lines, three in the last, but as some of these are repeated, there are only ten different symbols. About half of the signs occur here for the first time; the rest appear in a slightly changed form on the Phaestos disk or in hieroglyphic form in the Cretan pictographic script. One, a crossbeam with three dots below, also occurs on a cup from Apodulu. It is curious, however, that at the time of the already developed script A, such an antiquated hieroglyphic text should occur. This may perhaps be explained from the religious nature of the dedication since the axe must be dated about 1600 B.C. from the M.M. III material associated with it in the cave.

At Apodulu in the Province of Amari,¹ the finding place of the important goblet with the inscription was further explored. The excavations uncovered a spacious Minoan princely house, some 30 m. long which might be compared with those at Tyllissos, Niron Chani, Amnisos and Sklavokampos. It is the first building of this kind in the western part of the island. Unfortunately it was badly damaged because of the thin layer of earth above it and the ground plan of the building is not clear, since only the lowest course of the foundation of a few rooms is preserved. The objects recovered give at least some idea of the importance of this house: remains of various vessels of pottery, including a Bull's head rhyton, a double-axe of bronze, a sword blade of early form, a double-axe of thin gold, the only parallel so far known to those at Arkalochori. The most important object, however, is another piece of the goblet mentioned, with a continuation of the inscription which, unfortunately, does not join, as about one third of the vessel is still missing. A stone table of offerings also came to light which originally consisted of two pieces. This bears signs in the same linear script A. This cult object has an exact counterpart

¹ *A.A.*, 1934, p. 248, fig. 2.

at Phaestos. This building was erected in the latter part of the Middle Minoan period and was destroyed at the beginning of Late Minoan.

At Knossos, some exploratory excavations were carried out under the supervision of Mr. R. W. Hutchinson, the Curator. A votive rock-shelter, with pottery, some polychrome, and "sacral horns" were discovered immediately east of the high priest's house. Trial trenches on the summit of the Acropolis Hill west of the site of Knossos proved fruitless, as the shallowness of the deposit above the rock surface did not permit the survival of any important remains. As compensation, however, in the course of the tillage of the vineyard of the Villa Ariadne below, a magnificent torso of Hadrian was found "practically resting on a floor-level presenting a series of rich mosaics. The remains proved to belong to a considerable structure centering in a little columnar court containing a fountain, the metal work of which, however, had been removed. An elegantly draped female torso that came to light may represent a Muse. The mosaic designs actually uncovered were situated in a series of small apartments to north and south of the peristyle, from which they were separated by a surrounding corridor with fallen remains of painted stucco wall decoration. On the west side of the little court was a porch with columns of mottled marble and Corinthian capitals reminiscent on a smaller scale of the Olympieion at Athens. This led into the principal room, which has been left unexcavated, except for a mosaic medallion at the entrance. The heads of Dionysian figures in hexagons and medallions, which are the recurring subjects of the mosaics, show exceptionally good characterization, as is well seen in the face of a young satyr holding a flute. The medallion with a draped bust of the youthful Dionysos exhibits good chiaroscuro. In the opinion of the Ephor the mosaics in some respects excel any Roman specimens of the kind as yet found in Greece. A statue of a smaller version of the colossal statue of Dionysos in the British Museum, long-robed, bearded, and ivy-crowned, and executed under fine Hellenistic influences, had already been found in the vineyard."

"Enough of the building has been brought out to show that it merits a full investigation. We

have here first-rate examples of Greco-Roman art in the Hadrianic age."¹ The statue of Hadrian is also notable because it shows in the middle of the cuirass, in place of the usual Athena, an Amazon-like woman standing between an owl and a snake. No other example of this is so far known and the choice of this particular figure must be due to some local cult at Knossos.

At Mallia, F. Chapouthier, in the autumn of 1934, carried out some small investigations. At the northeast edge of the Palace, the abutting walls uncovered in 1928, were followed to a greater distance.² Along the north wall runs a street, bordering which is a large hall with a door on the north. Its walls are preserved in at least two courses of large blocks. A rectangular pillar inside supported the roof. Between this pillar and the Palace wall lie two bases with pointed rectangular surface, each with a round hole similar to the bases in the north colonnade of the Middle Court, which Chapouthier has explained as cult objects. One of these bases abuts on the Palace wall, the other lies half way to the pillar. The room is divided into small chambers on one side, which contained a mass of rough pottery, jugs, lamps, etc., and painted sherds dating from M.M. IIIB to L.M. Ia. The whole structure, the excavation of which has not yet been finished, lay outside the Palace, but is certainly contemporary with the latter and belonged to it. The chambers, no doubt intended for vases, can be compared with the pottery and the cistern in the north part of the Palace at Phaestos. Along the stylobate of the northern and eastern colonnades of the Great Court, Chapouthier did some slight investigation and at a deeper layer found some M.M. I sherds, but no wall. He does not, however, date the stylobate to so early a period, but assigns it to M.M. III. He has also completed the roofing of the house west of the Palace and has equipped its interior with coarse unpainted and painted vases of the period of its construction, L.M. Ia.

At Phaestos, L. Pernier, with the assistance of the engineer, M. Fasolo, has almost completed his extensive work of conservation. But two rooms of the northern part of the residential quarter are left uncovered.³ Only what was absolutely certain has been restored and the new can be recognized from the old at a glance. This work has brought

unexpected results since Signor Pernier has succeeded in showing that some of the cisterns of the Palace, which were hitherto regarded as Greek, are certainly Minoan—especially the one in the northeast part of the Palace. Close beside it is a long, sunken room in which, according to Pernier's plausible conjecture, the clay for the pottery, adjacent on the south, was worked. The large round pit in the west court, hitherto regarded as a bothros, is now seen to be a cistern of the earlier Palace. When the later Palace was built, it was covered over and was replaced by the well which Pernier has restored. The similar pits in the west Court at Knossos will now also have to be regarded as cisterns, as the corresponding pits at Mallia have always been interpreted. A new view is thus obtained of the Minoan water supply systems. The renewed investigation of the south-western quarter of the Palace is also important, since, when the later Palace was constructed, the ground here had been leveled by means of a massive "fill" of cement-like material which is also important for the dating of the pottery. The Temple of Rhea built on the Minoan ruins is now clearly recognizable in both its periods, the Archaic and the Hellenistic.

The work of conservation of the beautiful rooms in the living quarters of Hagia Triada has also been undertaken so far as possible. Unfortunately the pavement of alabaster slabs, almost perfectly preserved at the time of the excavations, can now almost nowhere be saved. The E.M. circular grave northeast of Hagia Triada has now also received a worthy publication.⁴

In May and June, 1935, trial excavations were made by the British School at Athens on the Acropolis (Kastro) at Siphnos. K. J. Brock and G. M. Young first examined the marble retaining wall which is visible on three sides below the mediaeval castle at the north end of the summit of the hill—the only part of the Acropolis not built over in modern times. This wall appears to date from the sixth century B.C. A pit dug on the north side of it reached, at a depth of 3 m. below the mediaeval ruin, a thick layer of Geometric and Orientalizing sherds. Into this layer three pithoi had been set at some later time, but probably still in the sixth century. The dangerous condition of the mediaeval ruin prevented further investigation. A similar layer of sherds came to light in a small trial trench on the east slope

⁴ *Ann. Scuola Ital. d'Atene*, 13-14, 1934, pp. 145 ff.

¹ Sir Arthur Evans, *The Times*, July 29, 1935.

² *B.C.H.* 52, 1928, p. 498.

³ Cf. Pernier, *Boll. d'Arte*, 27, 1933-34, pp. 475 ff., with 16 figs.

immediately below the retaining wall, but there was no trace of archaic or classical structures. The very steep slope of the rock 1 m. below the modern surface is unsuitable for buildings. Below the Acropolis, on the west slope, traces of an ancient city wall could be followed. Here only sherds were found, for the most part of Hellenistic and Roman times, and a few Geometric sherds in a trench near the foot of the hill. Close to the stream bed here a trial shaft revealed a Doric column with sixteen flutings, diameter 0.75 m., and beneath it a late, headless, poorly worked, draped statue of marble. On the slope of the hill to the south of the Kastro, Brock and Young searched for the archaic cemetery. Their extensive trenching, however, yielded only traces of early graves of the fifth century B.C., together with many Roman graves. The latter contained lovely glass vessels, numerous bronze utensils and some ornaments. In one of these Roman graves lay, along with objects of the kind mentioned, some beads and a seal of steatite of Geometric date; obviously in making this grave a Geometric grave had been encountered. The potsherds recovered include various examples of the "Island styles" of the eighth and seventh centuries, most numerous being Parian, next Siphnian and Melian, then those of Naxos and Chios. Some gray bucchero and other East Greek wares were found and also Protocorinthian and Corinthian. The complete absence, up to date, of remains of the most flourishing period of Siphnos, the sixth century, is most curious, and it is hoped that the next campaign will fill this gap.

The work of the Italian School was again devoted to the prehistoric town at Poliochni on Lemnos. The massive circuit wall still 5 m. high belongs to the second, the most flourishing of the three chief periods of the settlement. On the west side it has now been followed to its north end; the south side also has been traced. There was a gateway here which was later remodelled. On the west side was a projecting tower, up to which led a flight of steps. Behind the southwestern angle of the city wall a large hall with two long rows of seats has been cleared. It is the oldest example of a theatre-like structure, since the second period of Poliochni seems to be definitely earlier than Troy II, and the great open stairway in the West Court at Phaestos was hardly erected before 2000 B.C. The especial importance of the Lemnian city is due in no small degree to the fact that hardly a settlement in the eastern Aegean or in

Anatolia was constructed at so early a date and reached such a high state of development. Recent deep digging in the interior of the settlement has given the same picture: two neolithic layers; above them, one of the Copper Age which is earlier than anything Mycenaean and cannot have lasted to the middle of the second millennium. It is consequently considerably earlier than Troy VI, which, according to recent excavations, must be dated before the end of the Mycenaean Age (the Homeric layer being VIIa). The high cultural level of Poliochni II is astonishing, for besides the hall with rows of seats, a bath made of four stone slabs came to light; in another place a mighty cistern, by far the earliest in the whole Aegean area. It was already covered with debris in the third period. The objects found include: an immense number of spindle whorls which are definitely more ancient than the Trojan, a "pintadera" like those from Thessaly, clay stamps for decorating the bodies. Among the metal objects from the upper layer the most remarkable is an Oriental-looking small silver lion pierced for a pendant.

On Delos no digging was done in 1934, but on Thasos, M. Launey continued his researches with success, beginning with the paved court laid bare in 1933. East of this, a structure hitherto held to be a rock stairway was found to be a free-standing mass of rock, probably an altar. In front of it, on the west, traces of marble substructures are preserved. Perhaps these may belong to an enclosing wall or a "prothesis." The back of the rock, on the east, is cut away in a step-like manner. A row of holes has been hollowed out here, 0.60-0.80 m. wide and deep, with a second parallel row farther eastward. Between the two rows appear smaller holes irregularly spaced. One of the larger hollows was full of ashes; another contained a small diamond-shaped marble basis with a dowel hole in the centre, showing that it had supported a small column or wooden pillar. These hollows may have been intended for votive offerings. South of the court mentioned, below the street leading to the Silene Gate, a large building, 34 m. x 17 m. came to light. The badly damaged ruins are nowhere preserved above the euthyntheria. The northern part of it is occupied by a long, narrow hall which was connected with the court through a series of openings between rectangular pillars. On the other, the southern side, the building was divided into five compartments by cross walls running north and south. The

two eastern rooms open on the pillared colonnade with their threshold blocks still in place. The whole structure, which probably served a cult purpose, stands above a rectangular building, the outer walls of which, running from north to south, perhaps served as partition walls in the later building. The earlier, archaic building was certainly a temple and measures 17 x 7.38 m. The outer face of its walls is treated in a very handsome curved polygonal style, the inner face is made of small irregular courses much less carefully laid. The south wall is not polygonal nor is it of regular squared stone masonry. At the southwestern corner and near the southeastern corner it joins the polygonal wall. At this point the height of the foundation changes, but there is no sign of a reconstruction. In the south wall there is a threshold block and the places prepared for the jambs of a doorway, which was never built for the opening was closed, in the polygonal style on the outside, and with a more careless filling of stones on the inside. Here, too, one gets the impression of a change in plan during the construction of the building, not of a reconstruction. The early temple had a small portico in front and at the rear. In the interior still lie two small marble blocks, perhaps bases for wooden supports. Between them is a very remarkable rectangular structure of stones set on edge, 1.63 x 1.33 m., containing earth burned red, with a layer of ashes above, indicating that it was an altar for burnt offerings, exactly as in the temple at Prinias which corresponds also in its plan. Clearly this is the earliest cult building in this region, although this polygonal construction can hardly go back beyond the sixth century. A little farther south, near the close of the campaign, a circular building 6.30 m. in diameter came to light. On the outside only the foundations are preserved, but on the inside part of the superstructure still stands. In the middle, a badly preserved channel empties into a pit which widens below like a pithos. This was dug out to a point of 2.50 m. It seems to be a bothros inside a primitive tholos. Perhaps it was a Heroön, or merely a well. The circular building lies close to the southeastern corner of the structure built over the polygonal temple. Four meters eastward and exactly in the line of the south wall begins a very long building running from north to south. Its front was traced for a distance of 51 m. without finding the end which was covered by a modern house. Obviously this structure was about 60 m.

long, its width is 8.13 m. In some places one course is preserved above the foundation, and shows that it is not the front of a colonnade but a wall with wide doors. The thresholds, jambs, and lintels of these doors are sometimes cut in three fasciae, sometimes decorated with egg and dart moulding. The clean-cut ornaments recall the Ionian Treasuries at Delphi. Probably the magnificent Pegasos protome¹ belonged to this building of the end of the sixth century. Of the rear wall above an underlying step, a socle, 1.80 m. high is preserved, with moulding at its upper edge. Above it rose the wall of squared blocks, the outer face of which was not smoothed. About 0.80 m. farther back stands a sturdy wall of poros which hardly rose much higher than the socle and which protected the latter from the pressure of the earth and from moisture, since the back wall of the building is constructed in a cutting in the sloping ground.

A peribolos wall abuts against the southwestern corner of the structure above the archaic temple. It cannot yet be determined whether it surrounded the whole Sanctuary or merely a small area within it about the tholos, for only a small part of the wall has yet been uncovered. In the western part of the Sanctuary, south of the projecting platform,² a further section of the stepped approach was excavated. The identification of the Sanctuary proposed last year as the long-sought Herakleion of Thasos³ is confirmed by a newly found dedication to Herakles Kallinikos, first century B.C., in date. In it are two Graecized Latin words: ὀρκέωλος = orceulus or urceolus and γράδους = gradus. The other inscriptions are of very little importance. Among the pieces of sculpture are several fragments of a colossal statue of Caracalla⁴ from the year 215 A.D., also some grave reliefs and some wing fragments of a second Pegasos. Particularly important are the small terracotta antefixes found in the region of the archaic temple, several Gorgoneia, heraldic pairs of animals, riders on a winged horse and Chimaera, hitherto not represented. The few, and for the most part, unimportant sherds, include some Melian. The coins include bronze pieces of Cassander and of Antiochus I or II.

The terrace, partly cleared in 1933, which

¹ *B.C.H.* 58, 1934, pl.V.

² *A.A.*, 1934, p. 178.

³ *B.C.H.* 58, 1934, p. 262.

⁴ *B.C.H.* 26, 1902, p. 478 f. Discussed by G. Mendel.

appeared to support a small temple¹ has now been entirely cleared. On the eastern side of the outer foundation a gigantic stylobate block bears the traces of obviously Ionic columns with a diameter of 1.14 m. It is not certain that it is *in situ*, although its great weight favors that view. In that case we should have here not a terrace with a small cella, but a temple with a colonnade. The dimensions of the foundations, however, do not agree with those of the column that can be measured on the stylobate block, so the question remains unsettled.

P. Guillon made trial excavations at several points in old Thasos, so far as the modern village permitted. In the western part of the city, Roman and Byzantine buildings have covered everything earlier and in part re-used the earlier material. Some houses with paved courts, an Ionic peristyle and well, could, however, be recognized. In another place a wall-enclosed terrace of the fourth century was found, on which stood later habitations and shops with great amphoras. About 100 m. of the Hypostyle Hall² and some archaic architectural remains were also discovered. Among the architectural remains and sculpture that came to light in these trial excavations may be mentioned a head of Dionysos with fillet, and a bust of Marsyas.

North of Astakos on the Acarnanian coast Miss S. Benton of the British school carried out a trial excavation at a mediaeval site called Grabo,³ which produced only Early Bronze Age sherds. On an adjacent hill toward the north, a settlement of classical times was found. In, and in front of a cavern on the slope of the hill the trial digging brought to light many Late Mycenaean sherds of the fourteenth and thirteenth centuries B.C. (L.H. IIIa and b). Beneath this stratum lay an Early Bronze Age layer, above it was a little Greek pottery. The Mycenaean pottery is said to be like that from Polis on Ithaka. These hills dominate the road into the interior and were consequently an extremely valuable possession for the inhabitants of the islands opposite who had to send their cattle to the Acarnanian mountains in the summer. One hour westward from Astakos, about 150 m. above the shore, above a chapel of St. Nicholas, lies a cave in which was found a mass of Neolithic pottery like that which Miss Benton discovered at Meganisi on Leukas.

Connections with the two great periods of Thesalian Neolithic culture here join with that of Macedonia and the painted stone age ware of lower Italy. This lends special significance to the early period of civilization in the Ionian Islands. During the summers of 1933 and 1934 Miss Benton has thoroughly visited all of them, even the tiny ones off the Acarnanian coast. Her preliminary report⁴ shows how much that is new keen and trained eyes may still discover, even without digging, in places that have been much explored, such as Leukas, Ithaka and Kephallenia. Thus on Kephallenia a Minyan period has certainly been established. The differences between the Mycenaean pottery there and that of Ithaka is emphasized likewise by the almost complete lack of Mycenaean pottery on Leukas. Miss Benton has for the first time presented Zakynthos to archaeology. Her remarks on the Mycenaean pottery of Aetolia unfortunately do not deal with the hitherto unsolved problem of the local imitations of L.M. I, II prototypes at Thermon. Up to the present time, in the whole of Western Greece, north of Kakovatos, these remains stand quite alone. All other Mycenaean remains in this wide district are at least a century later, L.H. III.⁵

In March, 1935, Dürpfeld and Goessler sought again for the lower end of the Mycenaean water channel at Nidri on the island of Leukas. No prehistoric well-house was found, but the walls discovered last year proved to be those of a primitive Hellenistic well-house, open on the north, with a pillar between antae. In an adjoining western room lay in and about a circular pit 0.75 m. deep, more than a dozen spherical clay loom weights. Before being stretched on the loom the threads were probably dampened here. In the southwest corner of the main room lay many pieces of iron slag. On the east side were two basins, the larger of which contained the "Sitz" bath-tub mentioned before. It is consequently no earlier than other similar examples hitherto known. Sherds of classical and earlier periods make the search for a still earlier well-house not entirely without prospect. A conduit of the second millennium, like that of the Perseia at Mycenae, was obviously used throughout the whole of antiquity. Attempts to find the ancient

¹ *B.S.A.*, 1932, pp. 213 ff.

² *A.A.*, 1934, p. 178.

³ *A.A.*, 1934, p. 177.

⁴ *B.S.A.*, 1932, p. 243 f.

⁵ The prehistoric pottery of Corfu, which Miss Benton curiously omits, is now exhaustively treated by H. Bulle, in his publications on the finds from Aphiona.

road in the neighborhood of the well-house led to the discovery of the three Hellenistic slab graves, west of the precinct wall described by Dörpfeld.¹ Each contained a clay jug and a lamp; one had also an iron strigil. The richest, a child's grave, contained ornaments of gold and silver, including a serpent ring on the right hand, a shield ring on the left, four shield-shaped buckles, gold threads from cloth, a bronze mirror and a female terracotta figure. About 300 m. farther north additional graves came to light. Some are like those just described, others are more roughly built. One held a terracotta sarcophagus of peculiar tub-like form which has been taken into the Museum. The pottery points to the third century B.C.

On Cephallenia Mr. Marinatos devoted most of his time to the installation of the museum and excavated for only two weeks. Near the village of

Kontogenada he opened two Mycenaean chamber tombs which had been completely looted. They had handsome stone doorways. The upper part of the chamber had to be built of stone since the rock did not go high enough—a method of construction very instructive for the origin of the tholos tombs. In one of the graves, remains of a mosaic-like plaster were preserved. Trial excavations from Lakkithra to Kokkolata produced nothing Mycenaean, but revealed a Doric temple of poros and small altars near it, as well as two Hellenistic cemeteries in which two dozen graves were opened. They are for the most part empty pits in the rock. In two or three the dead person in the pit had been covered with large tiles in gabled form. The small objects, dating from the third and second century B.C. include tiny vases, glazed lamps, and remains of iron and bronze objects, one gold ring and one of silver.

ELIZABETH PIERCE BLEGEN

ATHENS

¹ *Alt Ithaka*, pp. 203 ff.

BOOK REVIEWS

WORK IN WESTERN THEBES, 1931-33 (THE ORIENTAL INSTITUTE OF THE UNIVERSITY OF CHICAGO, COMMUNICATIONS, No. 18), by Harold H. Nelson and Uvo Hölscher with a Chapter by Siegfried Schott. Pp. 118, Frontispiece, figs. in text 62. Chicago, 1934. \$1.50.

This modest looking pamphlet contains much important matter, being the 5th of the OIC series devoted to work at the well-preserved temple of Ramesses III, the others being numbers 5, 7, 10, and 15. The temple, it will be remembered, dates from the beginning of the twelfth century B.C. and is situated at the southern extremity of the Theban necropolis.

The first and longest section is Professor Nelson's valuable discussion of "The Calendar of Feasts and Offerings at Medinet Habu," a subject which has long engrossed him and taken much of his working time. Professor Hölscher's account of the close of his excavation of the entire temple area and some neighboring ground to the north forms the third section. His revelations of a fortress-like gate in the western temenos wall, opposite the well-known one on the east, of a palace, the earliest of its kind yet found, at the nearby funerary temple of Eye, as well as his general preliminary description of Eye's temple, which was usurped and enlarged by Eye's successor, Harmhab, shortly after 1350 B.C., all will arouse much interest. Intercalated between these two chief parts is a welcome summary by Dr. Schott of what he could ascertain about the various feasts celebrated at Thebes.

Communication No. 18 will be much used in connection with two of the Institute's large folios (*Medinet Habu III*, 1934, and *The Excavation of Medinet Habu I*, 1934), supplementing their short Introductions until the definitive text volumes are issued, but, like earlier *Communications*, it will have independent value for those who are not in a position to consult the expensive folios and yet wish to follow the Institute's results at Medinet Habu. For such readers this number is admirably adapted. It also offers certain illustrations not as yet published elsewhere. Indeed its line cuts and half tones are a rich addition to the articles of the three authors.

C. R. WILLIAMS

TOLEDO, OHIO

PAINTINGS FROM THE TOMB OF REKH-MI-RĒ' AT THEBES, by Norman de Garis Davies. Pp. ix, pls. 26. Folio. New York, The Metropolitan Museum of Art (Publications of the Egyptian Expedition, Volume X), 1935. \$20.00.

The first copies of scenes found in the tomb of Rekh-mi-Rē' were made by the French explorer Cailliaud as early as 1819, that is, even before the decipherment of Egyptian hieroglyphic by his brilliant countryman Champollion. Though Cailliaud as well as later visitors recognized the almost unique importance of this tomb¹ and made available selections from its riches, no complete publication was undertaken until 1888. But the volume produced in 1889 was quite inadequate. The English Egyptologist Newberry soon thereafter undertook a study of the tomb and in 1900 published in careful drawings about one-third of its scenes and inscriptions.² Other volumes which were to follow did not appear. Inscriptions recorded by Newberry have since been studied especially by Gardiner, Farina, and Sethe. A collation of some badly defaced passages was carried out for Sethe by Mr. N. de G. Davies, to whom we owe the text of the volume now under review.

Both its wall paintings and its inscriptions lend to the tomb of Rekh-mi-Rē' especial value and interest. Its scenes illustrate better than any other known Egyptian source the peoples and products of lands in contact with Egypt in the 15th century B.C., when the conquering pharaoh Thutmose III had brought Egypt to the height of her imperial power. Its inscriptions contain the fullest and best preserved accounts of Egyptian administrative principles; for Rekh-mi-Rē', who was prime minister in those stirring days, recorded for posterity the charge delivered by the sovereign at his installation as well as an outline of his duties.

Now, well over a century since its importance was first recognized, a forthcoming definitive publication of the tomb of Rekh-mi-Rē' in two quarto volumes is announced in the prefatory

¹ Breasted, *Ancient Records of Egypt*, II, Chicago, 1906, §663 calls it "the most important private monument of the Empire."

² Percy E. Newberry, *The Life of Rekhmara*, Westminster, 1900. For the history of work done in the tomb up to that time see pp. 11-13.

note to the present volume. Line drawings will doubtless play a large part in these new volumes, as they did in Newberry's, for past occupation of the tomb as a native dwelling has left especially the lower parts of its walls seriously defaced. Fortunately, however, enough paint survives elsewhere to make possible the present supplementary volume of magnificent color plates. With this and the two quartos the Metropolitan Museum of Art will have added still another to its series of artistic and scientific recordings of Theban tombs.

The details chosen for reproduction illustrate four main themes: foreign tribute-bearers, taxes in kind delivered to the storehouses of the god Amūn, artisans at work on the god's estate, and equipment and ceremonial for the dead. The foreigners come from Syria, from Upper Nubia, from Punt on the Red Sea coast (perhaps Eritrea, where Italy now holds sway), and from Crete in the Mediterranean. The Cretan vases of gold here depicted are particularly notable. Syrian gifts include horses, a bear, and an elephant. From Nubia come ivory, ebony, pelts, hunting dogs, a leopard, a baboon, and a gaily spotted giraffe up whose neck, as though it were a tree, a green monkey is climbing. The Puntites bring ostrich eggs and plumes and an incense-bearing tree. All these peoples are duly distinguished in skin color, physiognomy, coiffure, costume, and jewelry. The products of their soil and of their hands are further illustrated in the tax receipts. The brickmakers on the estate of Amūn are captives, some of them old men with white hair and beard, from diverse regions of the empire. Garden and funerary scenes shed light on the Egyptian home—its grounds, its furnishings, and the food served at its meals. All in all, the color plates of this volume epitomize Egyptian life at its fullest and richest.

Egyptian artistic conventions are well revealed by these plates. The standardized colorings and the distortions due to combination of different viewpoints in the drawing—defects in our eyes but not in those of the ancient artist and his public—are more than overbalanced in Rekh-mi-Rē's paintings by excellent composition in both line and color. Such groups as the Nubian hunting dogs and the men bringing papyrus stalks and jars of wine to Amūn display greater freedom and variety of posture than usual. No effort was made to keep the various elements of a scene to a common scale; instead, relative size expressed relative

importance. Hence even the elephant brought by a Syrian envoy stands only half as high as his escort, so that, as Mr. Davies phrases it, the animals may not overpower the procession. Again, the men filling water jars at a garden pool for use in brickmaking are several times as large as the trees that so decoratively girdle the pool.

The modern artist to whom most of the color plates are due is Mrs. Davies. She and her fellow artist, Mr. Wilkinson, have both succeeded admirably in retaining the feeling of the original paintings; and the London firm of Emery Walker, Limited, is likewise to be congratulated on the quality of its reproductions. Key plates in line enable the user to visualize the place of each detail within the larger composition of each scene and of each wall as a whole. The production of such a record as is embodied in this volume is in itself a matter of years. The reviewer recalls that in 1924 he met Mrs. Davies in this very tomb, when she was hard at work upon one of its scenes. It is a pleasure now to be able to report the availability of the finished results.

T. GEORGE ALLEN

THE UNIVERSITY OF CHICAGO

EXCAVATIONS AT TEPE GAWRA. Volume I, by E. A. Speiser, American Schools of Oriental Research. Pp. xvi+220, 86 pls. Philadelphia, University of Pennsylvania Press, 1935. \$6.

This final publication of the results of the excavation of the eight upper strata of Tepe Gawra is a work on which Professor Speiser deserves our hearty congratulation. The readers of this JOURNAL are already cognizant through preliminary accounts of what has been done at Tepe Gawra. This volume presents the full results with clearness and scientific accuracy and draws the legitimate historical inferences from them. The rigid restraint with which these deductions are drawn is most commendable.

The volume begins with a description of the site, and an account of the discovery of the finds. Miss Dorothy Cross then contributes a chapter on the pottery, which Professor Speiser follows with a description of the other objects found—terracottas, stone objects, objects of copper, bone, seals, and seal impressions, beads, amulets, miscellaneous objects, and the burials. Three chapters are devoted to "comparisons and results." This is the speculative portion of the book. It takes up the "foreign relations" of the ancient peoples who dwelt at different times on Tepe

Gawra, the dating of the strata, and concludes with a brief discussion of "general results." This separation of the speculative material from the rigidly objective description of the objects found is, so far as the reviewer knows, new in works of this class. Far too often an excavator's theories have been so interwoven with his accounts of discovery that the reader has found it difficult to separate the two and rises from the reading without a clear scientific perspective. It is to be hoped that Professor Speiser's example will be followed by those who in the future write similar works. The plates are well made and give to the eye full details of all the architectural and other remains found. The volume is accompanied by a catalogue which gives full information as to the make and dimensions of each object. On p. 183 a chart presents to the eye the chronological sequence of civilizations represented,—neolithic, chalcolithic, copper and bronze, with an indication of the corresponding Babylonian civilization or those of Obeid, Uruk, Jemdet Nasr, early dynastic, etc., contemporaneous with each. It well epitomizes the concise and clear presentation of results exhibited throughout the volume.

Archaeologists are indebted to Professor Speiser for the insight which led him in 1927 to see the scientific importance of excavating Tepe Gawra, for his excellent work on it since, and for this presentation of the results achieved hitherto. We look for many years of similarly fruitful work from his hands.

GEORGE A. BARTON

PHILADELPHIA

ARABIA AND THE BIBLE, by *James A. Montgomery*. Pp. x+207, University of Pennsylvania Press, Philadelphia, 1934. \$2.00.

The close relationship of the Hebrews with the Arabs both racially and linguistically has been known for some time. That this kinship should be taken into consideration in the careful study of the Bible could well be expected. It was, therefore, quite natural that at least its philological phase should engage the attention of early Jewish students of the Bible who lived in the Arabic speaking countries.

As early as in the first half of the tenth century Judah ibn Koreish, in his Epistle to the Jewish community of Fez, emphasizes the importance of comparing Hebrew with its sister languages for the better understanding of the Bible. He then continues: "But this is especially the case with

Arabic, for many of its rare expressions are found to be pure Hebrew, so that the difference in these instances between the two languages lies solely in the change of the letters *sad* and *dad*, *gimel* and *jim*, etc. This linguistic resemblance and amalgamation were occasioned by the contiguity of the countries of both nations and their close racial kinship" (*Risālah*, ed. Bargès, Paris, 1857, p. 2). This view was likewise maintained by other leading Hebrew philologists of the tenth and eleventh centuries.

These early attempts, however, at tracing the Arabic element in the Bible were purely philological in character. Very little has been done to delineate the influence of Arabia as the *Hinterland* of Palestine on the Bible. While the dependence of the Holy Land on Egypt and Assyria have been fully discussed by scholars, and its indebtedness to the Minoan civilization and the Hittites has been equally investigated, the part that Arabia plays in the Bible has not been brought sufficiently to light. It appears that the striking results of archaeological discoveries of the last few decades have tended to obscure the undeniably close contact of the Hebrews with the desert life of the *Hinterland* and the influence it had exercised on their life and thought.

This deficiency is now fully remedied by Prof. Montgomery in his volume on *Arabia and the Bible*. With his usual thoroughness the author sets forth an imposing array of evidence that "to understand Israel's origin we can and must go back to Arabia, and must recognize in Israel's perennial consciousness of her Arabian origins and relationships her most vital spiritual force" (p. 5). This volume containing the substance of the Haskell Lectures for 1930 delivered at Oberlin College is informative in character and will be of interest to the larger reading public. Yet it is so very well documented with authentic references, as to engage the attention of the more serious student too and stimulate him to further inquiry.

The following additional references may be mentioned here. P. 12, n. 22: Cf. "Ye are the children of the Lord your God" (Deut. 14: 1). P. 13, n. 23: *Hai* in 1 Sam. 18:18 is taken also by Gesenius-Buhl in the Arabic meaning of "tribe;" it may be of interest to add here that David b. Abraham al-Fāsi (tenth century) takes *hayyah* in 2 Sam. 23:11, 13, Jer. 27:6, and Ps. 68:11 as referring to the people of the desert who dwell in tents, rendering also *hayot* in Ex. 1:19 *sahrawiyyat*, *badawiyyat*, i.e. women of the desert,

bedouin women, who are much stronger than city people (cf. also Gesenius, *Thesaurus*, p. 470b). P. 35, n. 16: some rabbinic exegetes associate "Hagarites" with Arabs (cf. Rashi on 1 Chron. 5:10); Abraham ibn Ezra refers to Arabic as the language of the "Hagarites" (*Moznayim*, 3a), and *Hagrah* is mentioned in Midrash Rabbah on Numbers, XIII, together with Yemen, as a region in South Arabia. Pp. 125 and 133: the reviewer confesses his ignorance of any source giving the date of Mohammed's birth as 562; the traditional date of his birth is, of course, 570, though Lammens is inclined to fix it "towards 580, if it is true that he barely passed his fiftieth year" (*L'Islam, croyances et institutions*, English translation by Sir E. Denison Ross, London, 1929, p. 24).

The volume, absorbingly interesting, is provided with two indexes, of scriptural references and subject matter, which enhance its value as a ready reference work of a phase of biblical antecedents hitherto sadly neglected. It will form a very important addition to the library of the biblical student, as well as to that of the historian of ancient Palestine.

SOLOMON L. SKOSS

DROPSIE COLLEGE

DENKMÄLER PALÄSTINAS, EINE EINFÜHRUNG IN DIE ARCHÄOLOGIE DES HEILIGEN LANDES, by Carl Watzinger. I. *Von den Anfängen bis zum Ende der israelitischen Königszeit*. Pp. 1-117. 10 figures in text, 40 plates. Leipzig, 1933.

A valuable guide to the archaeology of Palestine has recently been compiled by Dr. Carl Watzinger. The book covers the period from prehistoric times to the end of the Israelite Kingdom. In his introduction, the author gives a brief account of the physical geography of the country, a survey of outstanding itineraries to the Holy Land, and archaeological campaigns.

Dr. Watzinger treats his subject in chronological order, beginning with primitive Palestinian man, as represented by the Galilean skull. He divides his book into four chapters: (1) Early Period—Stone Age; (2) Canaanite Epoch—Bronze Age, subdivided into three main stages: Early, until 2000; Middle, until 1550; Late, until 1200; with a discussion on the formation of cities, building construction, sanctuaries, and tombs; (3) Time of Wanderings and Wars; Northern nations and Philistines, Philistine culture; (4) Period of Israelitish Kings. This final chapter includes

an account of the walls of David in Jerusalem, a lengthy description of Solomon's temple and palace, the palaces in Samaria, dwellings and art objects.

The author points out that the excavations of the last few decades have revealed much additional material which discloses strong Egyptian influence during the Canaanite period, and in some areas, during the early Israelite period. Beside the Egyptian influence, with the waves of migration in the second millennium, Akkadian influence is evident in Palestine, as the Amarna letters disclose, since Semitic tribes lived in Palestine before the Bronze Period.

During the entire Bronze period, flint remained in use. Metal tools in the middle of the Bronze period were rare; later more copper and gold were frequently employed.

The excavations of Jerusalem show that during the period of the kings, the city included only the eastern hill. The western gate of the Tyropean valley was in use until the destruction of Herod's Temple.

The ground plan of the Temple of Solomon resembled the Assyrian temples; its architecture and art, the Phoenician. Because of the close connection of Ahab with the Phoenicians, the workmanship of the Phoenicians was introduced into the palace and temple construction in the Northern Kingdom.

After Dr. Albright's stimulating work in the field of Palestinian archaeology which found fine expression in his *Richard Lectures*, University of Virginia (cf. his *Archaeology of Palestine and the Bible*, N. Y., 1932), a need has been felt for a survey of the archaeology of Palestine based on recent finds. This need is well provided by Dr. Watzinger's treatise. Not only does he make use of Palestinian discoveries, but he likewise utilizes for comparative study the results of excavations outside of Palestine: Assyria, Babylonia, Egypt, and Greece. The forty supplementary plates admirably illustrate the text. It is to be hoped that a continuation of this excellent work by Dr. Watzinger will follow.

PAUL ROMANOFF

MUSEUM, JEWISH THEOLOGICAL
SEMINARY OF AMERICA

MALTA: ORIGINI DELLA CIVILTÀ MEDITERRANEA, by Luigi M. Ugolini. Pp. xv+315, figs. 114, pls. XII. La Libreria dello Stato, Rome, 1934.

Ugolini has had the opportunity of submitting the island of Malta and its important remains to

a thorough investigation. A complete publication of the Prehistoric antiquities of Malta by the same author has been announced. The present volume does not belong to this series. The author only summarizes the results of his competent research in a general way, expanding his study to a comprehensive survey of the early Maltese civilization. This volume is amply illustrated by beautiful new photographs and provided with a useful bibliography. The first part, based on recent scientific research, briefly indicates the geographical, geological, anthropological, and historical data relating to Malta. In the second a short description of the splendid Neolithic monuments is given. Ugolini then devotes several chapters to a reconstruction of the Maltese civilization on an archaeological basis, including religion, social life, and culture. He draws a fascinating picture of the high standard attained by the people of Malta in the Stone Age. This treatment of civilization is very exhaustive and many of the author's suggestions are attractive. In some details the facts are pressed and theories developed out of mere possibilities. Thus in the chapter on religion thorough use is made of Zammit's fanciful hints (Cf. Zammit, *Prehistoric Malta*, London 1930, pp. xvi, 36, 43 f.). The Neolithic inhabitants of Malta, it is suggested, were in possession of oracles, which issued their responses through amplifiers and practised the custom of incubation. The author also ventures to attack the intricate problem of asexual idols which occur in many a Prehistoric civilization, and interprets the absence of male figures among the sculptural representations as due to a matriarchate. In these cases the scanty material preserved seems to warn against conclusions so definite.

In dealing with the archaeological evidence, Ugolini makes two important points. He conclusively proves that the metal implements found in the upper stratum of Hal Tarxien date from the Copper Age, and not from the Bronze Age as assumed by Zammit and others. He follows Zammit and Mayr in considering the civilization of the lower strata Neolithic, but assumes that this civilization was ended by an invasion of Chalcolithic tribes. This suggestion sounds very plausible, but seems to contradict the explicit statement of the excavator regarding the stratification at Hal Tarxien (Zammit, *op. cit.*, p. 47.)

The value and import of Malta's Neolithic civilization partly depends on its date. It has

hitherto been considered as a retarded type of culture belonging to the second or third millennium B.C. In Ugolini's opinion, however, Malta is the most outstanding, the most ancient, in fact the only considerable Neolithic civilization of the Mediterranean to be dated from 8000 to 3500 B.C. It is in Malta, according to Ugolini, that the building of rectangular, circular, and domed houses originated and the potter's wheel was first used. The author especially aims to show that the civilization of Malta is independent of Northern Europe as well as of the Orient. He bases this conclusion on the fact that all Eastern civilizations are Chalcolithic. Recent excavations at Arpachiyah, however, revealed four strata entirely devoid of metal (TT.7-TT. 10. Cf. Mal'lowan, *Iraq*, II, 1935, pp. 16 f., 22 ff., 104). The same seems to be the case with the fifth level at Ras Shamra (Schaeffer, *Syria*, XVI, 1935, pp. 162 ff.) and the same may be expected in the lower strata at Tepe Gawra.¹ The strata in question should be dated at least as early as 4000-3500 B.C. Furthermore, there is no positive evidence whatever for the assumption that copper appears in the Western Mediterranean earlier than in the Orient. The possibility therefore remains that Neolithic Malta was contemporary with Eastern Neolithic, or even Chalcolithic civilizations. Nor can the origin of house types be considered as definitely settled. Tholoi have been discovered in the lowest strata of Arpachiyah, and a rectangular temple came to light in Tepe Gawra 12, while the existence of a rectangular palace in Malta depends on Zammit's conjectural interpretation of the supposed fragment of a house plan.

From the beginning, the Neolithic culture in Malta appears in a highly developed stage. Ugolini suggests that an immigration from Northern Africa might have taken place, and his view has won the approval of MacIver (*Antiquity*, 1935, pp. 204 ff.). We must await further exploration of the African districts for decisive information on the cultural currents of the Neolithic period.

Ugolini's book deserves attention as an able and enthusiastic appreciation of the important Maltese civilization, and his attempt to develop one of the possible solutions of this problem will

¹(I am indebted to Professor Speiser of the University of Pennsylvania and to Mr. Bache of the University Museum of Philadelphia for valuable information on this point.)

prove helpful in further investigations of the Neolithic period in the Mediterranean.

GEORGE M. A. HANFMANN

SOCIETY OF FELLOWS

Harvard University

NEW LIGHT ON THE MOST ANCIENT EAST (The Oriental Prelude to European History), by *V. Gordon Childe*. Pp. xviii+326, figs. in text 102, pls. XXXII. London, Kegan, Paul, Trench, Trubner and Co., 1934. 15 sh.

This book, as the title implies and the introduction states, represents a rewriting and amplifying of the material presented by the same author in 1929 under the title "The Most Ancient East." It is not, however, a book mechanically expanded by additions and insertions. Except for the first chapter, which, with slight exception, is identical with that of the earlier book, the material is thoroughly reworked, the results of excavations since 1929 described, discussed and illustrated, and the problems of Near Eastern archaeology reconsidered in the light of recent discoveries.

Mr. Childe has so long been practicing the art of authoritative popularization that no comment need be made upon his skill in presenting what is actually known or the care with which he discusses the varying possibilities of theories for which the evidence is slight, whether they be his own or those of others. Some of the material seems inherently recalcitrant to such treatment, especially the later phases of the palaeolithic age. Perhaps it is the specialist rather than the layman who profits most by Mr. Childe's ability to present in a coherent and interesting manner and within the limits of a single modestly priced volume the results of excavations and investigations published either in expensive special books or in articles scattered throughout the numerous professional journals. New in this volume are discussions of Tasa and Merimde in Egypt, of Tell Halaf pottery and of the material gathered by Sir Aurel Stein in Baluchistan and Persia.

HETTY GOLDMAN

NEW YORK

MILET: ERGEBNISSE DER AUSGRABUNGEN UND UNTERSUCHUNGEN SEIT DEM JAHRE 1899. Herausgegeben von *Theodor Wiegand*. Band II, Heft 3. DIE STADTMAUERN, by *Armin von Gerkan*. Pp. vi+135, figs. in text 88,

pls. 24. Berlin & Leipzig, de Gruyter 1935. RM. 60.

There are neglected aspects of every large-scale excavation. Through accident of interest or emphasis, when the final account is compiled, some elements will receive less than their due. City walls are likely to be step-children of this sort; and the walls of the Ionian metropolis of Miletus have been no exception. Now, a quarter of a century after the event, on the basis of other diggers' field-books dating back to 1899 and his own surveys of 1908-1912, von Gerkan adds this volume to the great series "Milet" and, in spite of the obvious handicap, comes out surprisingly well. Barely a third of the intricate five-mile circuit was ever excavated or even explored (the sunken and marshy terrain was largely to blame) and not all of the evidence was appreciated at the time, while the excavated sections were still exposed. From his heirloom of notebooks, his own records and recollections, frequent appeal to the better preserved fortifications of the nearby Latmian Heracleia, and the exercise of much ingenious reasoning, von Gerkan has managed to reconstruct gates, towers, and ramparts from what seems to be rather scanty material evidence. Since no outsider need expect to criticize or combat the accuracy of such work, we can only put our trust in von Gerkan's well-known care and ability, and accept what he shows. As always in the Miletus publication, typography and illustration are extraordinarily fine. And although such a book can scarcely make interesting reading in its detailed documentation, the more general chapters and the historical summary raise topics of first-rate importance.

The entire chronology of Greek city walls needs drastic revision. Misled by the easy formulas which equated ashlar work with Hellenistic, semi-polygonal with the fifth century B.C., and all cruder or stronger styles with the archaic, we have largely failed to realize that there were, at most, only fortified acropoleis in mainland Greece at the Persian invasion and that only a few of the Asia Minor Greek towns had revived the pre-Hellenic Asia Minor tradition of protective walls of stone around their settlements. Yet if we will but read Thucydides attentively we shall find that even in 428 B.C. Ionia was in general unfortified, Chios and Mitylene were building their walls, the Aetolians still dwelt in unwall'd villages, and there was scarcely a fort in Macedonia; as late as 412 B.C. Clazomenae, Cnidus, and Ca-

mirus are specifically mentioned as unfortified. And although, first and last, Thucydides mentions a considerable number of walled sites (notably in Thrace), the archaeological evidence will show that most of these were relatively recent constructions. All the Long Walls connecting cities with their ports are demonstrably later than the Persian Wars (Athens probably being the first, followed by Megara, Corinth, Patras, and Argos). These defenses had been preceded at no great interval by fortifications around the harbors (Peiraeus as early as 478 B.C.) and around the towns themselves. In the sixth century B.C. the mainland Greek towns possessed only occasional fortified acropoleis, while in Asia Minor, according to Herodotus, it was to resist the Median advance under Harpagus in 543 B.C. that many of the Ionian Greeks built walls around their towns (so, notably, Phocaea, whose walls much impressed Herodotus). In the seventh century, at the time of the Cimmerian invasion, Sardis had a strongly walled acropolis, but could not defend the lower town; and Smyrna and Colophon were similarly helpless against the Phrygian power.

In harmony with all this we learn from von Gerkan that Miletus had only a small fortified hilltop in the seventh century, that it tried to extend these defenses at the coming of the Medes in the middle of the sixth century, but that the great girdle wall around the city proper dates from the close of the Peloponnesian War at the very end of the fifth century, and much of the final state of the wall is due to the development of military engineering in the Hellenistic Age. There have been numerous attempts, particularly in Germany, to write a very different history for these Milesian defenses and, by extension or implication, for Greek city walls in general. Von Gerkan answers these with the only arguments that are cogent—the facts of excavation interpreted by adequate architectural knowledge. Even those who do not like the inescapable chronology which results, will thank him for the most up-to-date plan of the city of Miletus that has yet been offered.

RHYS CARPENTER

BRYN MAWR COLLEGE

CORPUS VASORUM ANTIQVORVM, U. S. A. fasc. 2; Providence, Museum of the Rhode Island School of Design, fasc. 1. By *Stephen Bleecker Luce*. pp. 49; 31 collotype plates and

one in color. Harvard University Press, 1933. \$3.

This is a welcome addition to the American fascicules of the Corpus. Though the collection in the Rhode Island School of Design is still small (129 pieces are here published), it is choice. A large proportion of the vases have merit, and quite a number of them are of really fine quality. Much of the credit for the formation of the collection is due to Eliza Greene Radeke, to whose memory the fascicule is dedicated, and to Edward Perry Warren, who coöperated with her through many years in building it up. A noteworthy series of twenty-five vases was purchased from Warren in 1925; four pieces are recorded as given by him; and it is probable that most of the vases presented by Mrs. Radeke had passed through Lewes House.

The first eight plates illustrate 43 early vases, classified as follows: Egyptian (17), Mesopotamian (1), Cypriote (1), Mycenaean (1), Rhodian (1), Greek island ware, identified by Luce as Naxian (1), Corinthian (15), Chalcidian (1), Attic geometric (5). The most important piece in this series is the Chalcidian oinochoe, Pl. 7, already published by Rumpf, and assigned to the painter of the Phineus cup. The last four plates take care of 25 late vases, South Italian, Etruscan and Roman. The remaining twenty plates are devoted to Attic vases of the sixth and fifth centuries, black-figured (13), red-figured (28), miscellaneous (20). The only signed piece is the Nikosthenic amphora, pl. 9, 2. But a number of the red-figured vases have been attributed to gifted artists: two archaic cups (Olto, Epiktetos), an askos (Makron), a lekythos (Brygos painter), a skyphos (Lewis painter), and the amphora which gives "the Providence painter" his name. There is also an alabastron by the painter of Berlin 2268; and a Nolan amphora is attributed by Luce to the Nikon painter. Several other pieces are attractive for the subjects represented or the quality of their drawing.

The photographs are uniformly excellent. Many of the vases are shown in several views, and usually on an adequate scale. The full-size details from two Nolan amphorae on plate 16 make one wish that other vases had been similarly illustrated, e.g., the Brygan lekythos with a seated goddess, pl. 19, 1, and the lekythos with a flying Nike, pl. 19, 2. In a few instances the photographs have been supplemented by good drawings from the hand of Miss Miriam A. Banks.

In his text Dr. Luce has confined himself for the most part to essentials. He has classified the material well, has written careful, detailed descriptions, and has recorded previous publications in the bibliographies. Occasionally he has added original observations of value. In a review, *J.H.S.*, LIII, 1933, p. 310, Professor Beazley has given, from his unique store of knowledge, many interesting and illuminating comments on the vases, which users of this fascicule will be well advised to consult. A few points, noted during a recent examination of the collection, are added here for what they may be worth: Pl. 7, 1. I do not believe that the bodies of the sphinxes were intended to be male. Pl. 8, 2. "Prothesis scene." There is no prothesis, and nothing suggests that the six women are mourners. They are shown hand in hand, the hands being held at shoulder level, and they appear to be executing a dance.¹ Pl. 14. A pity that no photograph of the inner picture was given. Luce had previously described the remains better (in *A.J.A.*), for he mentioned "a little bit of detail, so small as to be unrecognizable." Beazley says his note gives the remains of a maenad as well as a satyr. And Kraiker, in the article cited by Luce, says that the feet are both *left* feet and mentions a bit of drapery. It is obviously part of the end of the maenad's sleeve. The description of the exterior, side A, is confused. "Only three figures and part of a fourth remain." There ought to be five to match the five on side B; there is room for five; and Luce himself describes remains of five: (1) Maenad with thyrsos and hand on hip. (2) Silen with horn and wineskin. (3) (Mostly missing) Dionysos moving to r. with arms outstretched (somewhat as on the London Kotyle E 139, Hoppin I, p. 319), horn in right hand, end of vine in left. (4) (Mostly missing) Maenad holding thyrsos and horn. (5) Silen with body in rear view, gesticulating. The object which Luce says this silen is holding in his left hand is not a horn; it is the tip of a thyrsos which must have been held by the maenad, no. 4. Pl. 15, 1. The dimensions (height 24 cm., diameter 19 cm.) give an impossible proportion. And no help is to be got from the scale, "ca. 1: 2. 4," since that has evidently been cal-

culated from the dimensions. I cannot see that these indications of scale on the plates have any practical use. The height of the lekythos is probably 34 cm. Pl. 17, 1. The interpretation of the subject as a potter at work is puzzling. Would an Attic potter of the fifth century fire a large pot in an open oven instead of in a kiln? The "solid seat, on which hangs drapery" (not visible in the photograph) constitutes another puzzle. Pl. 18. The cloth hanging from the cithara probably served to protect the more delicate parts of the instrument when not in use, rather than the garments of the player. Pl. 19, 2. Beazley remarks: "by the Pan painter, I think." A full-size illustration of the Nike would, in my opinion, suffice to confirm this attribution. I will mention one detail, because Luce has omitted it. She wears a necklace with a tiny ornament, done in thinned paint. For very similar necklaces, see Beazley, *Der Pan Maler*, pls. 12, 1 (two examples); 12, 2; 14, 1; 14, 2; 15, 1; 15, 2. Pl. 20, 2. The woman is not spinning. She holds a long cord with tasselled ends, — a duplicate of the girdle she is wearing.

L. D. CASKEY

MUSEUM OF FINE ARTS
Boston

ARYBALLOI AND FIGURINES FROM RHITSONA IN BOEOTIA, by P. N. Ure. An account of the early archaic pottery and the figurines, archaic and classical, with supplementary lists of the finds of glass, beads and metal, from excavations made by R. M. Burrows and P. N. Ure in 1907, 1908, 1909 and by P. N. and A. D. Ure in 1921 and 1922. Reading University Studies. Pp. 107; 9 figs. in text; pls. 21. Cambridge University Press, 1934. The Macmillan Co., N. Y. \$7.50.

The scope of the book is set forth in the subtitle. The British excavations at Rhitsona, begun more than 25 years ago, were singularly fruitful in results — the kind of results which are appreciated by the modern scientific archaeologist. Though they produced few works of art, they brought to light great quantities of modest, workaday pots and figurines in a series of undisturbed graves. In 1927 Mr. and Mrs. Ure published their *Sixth and Fifth Century Pottery from Rhitsona*, one of the most valuable excavation reports of classical pottery produced in modern times. This has now been followed by the present publication which comprises the Geometric, Protocorinthian, and Corinthian pottery, all the terracotta statuettes "from their earliest appear-

¹ Cf. Kunze, *Ath. Mitt.* LVII, 1932, p. 134, note 1. In the sherds published in *Argive Heraeum*, II, pl. 57, nos. 15-18, the women are certainly performing a ritual dance. Most of the pairs of joined hands are similarly raised, and hold a branch.

ance at Rhitsona, about the beginning of the sixth century, onwards," and the miscellaneous other objects. A catalogue of the grave contents and an appendix of Corinthian aryballoi from other sites related to the Rhitsona examples form useful additions.

Perhaps the most important feature of the Rhitsona cemetery is that each grave was normally used but once and that we therefore have a series of well furnished graves "each with a number of vases that were unquestionably all buried in a single day." A few clues for relative dates were occasionally supplied by the position of the graves; but for the absolute chronology little new evidence emerged. With regard to the latter, therefore, Mr. Ure has had to lean on the scant evidence provided by the cemeteries of Sicily and Italy. It is satisfactory to note that, with a few reservations, he finds himself "in practical agreement" with the chronology proposed by Payne in his *Necrocorinthia*.

Mr. Ure is to be congratulated on an intricate piece of work admirably accomplished. We now have a complete record of the Rhitsona cemetery from the eighth to the third century B.C., and since the contents of each grave are exhibited as a unity in the cases of the Museum at Thebes, the results of the excavation may be said to have been made available in exemplary fashion.

GISELA M. A. RICHTER

METROPOLITAN MUSEUM OF ART
New York

MEGARISCHE STUDIEN, by *Krister Hanell*. Pp. 226.
A. B. Ph. Lindstedts, Univ. Bokhandel, Lund, 1934.

In this monograph on the history and the cults of Megara the first section deals for the most part with the pre-Dorian and the Dorian city, while in the second the relations of the colonies to their mother city are examined. Owing to the lack of excavation and of significant epigraphical record, the author is necessarily confined to evidence in the literature of travel, geography and mythology. The local Megarian histories have perished. Pausanias is the best source for native Megarian tradition although he, like Plutarch and Strabo, was dominated by the Athenian point of view. Hanell's suggestive discussion of the relations of the city with other towns leads to the conclusion that Megara had close associations with Boeotia rather than with Athens, where political considerations fabricated evidence of an early relation-

ship. The Athenians are accused of appropriating Pandion, Alkathoos and Nisos to support their claim that Megara had been Athenian territory in early times. The Megarian ties with Boeotia as well as with Eleusis were pre-Dorian. The kinship of Megarian and Argive cult is attested by the worship of Zeus Aphesios, Apollo Pythaeus and Hera. The cult of Hera at Perachora where excavation has yielded a rich harvest was an importation from Argos.

In the second section, correspondences in organization of Megara and its colonies are discussed. The relation of colonial cults to those of the mother city cannot be appraised because of the lack in literary sources except in the case of Byzantium. Selinus offers some monumental evidence. The attachment of Byzantium to Megara is attested by its calendar. This shows some Argive influence which may have been originally transmitted to the Megarian calendar (now lost) when Argos Doricized Megara. A convenient appendix gives the sources for the colonial cults. A detailed appreciation of this good monograph is the task of the historian rather than of the archaeologist.

G. W. ELDERKIN

PRINCETON UNIVERSITY

STANDARDS OF POTTERY DESCRIPTION, by *Benjamin March*, with an Introductory Essay by *Carl E. Guthe* (Occasional Contributions from the Museum of Anthropology of the University of Michigan, No. 3). Pp. 55, figs. in text 8, pls. II). Ann Arbor, Michigan; University Press, 1934. \$75.

Mr. March's pamphlet deals with the proper method of cataloguing ceramic material so that the written records may be used for purposes of comparison with objects in other museums. He himself is occupied with Chinese pottery, but his suggestions are designed to meet the difficulties common to all such work. First and foremost are the difficulties of translating color distinctions into words. For this he suggests recourse to *A Dictionary of Color*, by A. Maerz and M. R. Paul. Then there are the difficulties arising from the lack of a standardized and generally accepted vocabulary for describing the qualities of clay and surface decoration.

Mr. March's suggestions have the virtue of simplicity and common sense, although they are perhaps less applicable to the field of prehistory than to the highly perfected products of Chinese

art. Chapter VIII describes the Pantograph which accurately reproduces profiles by mechanical process, and in chapter IX Mr. March describes and illustrates his own method of recording on index cards.

HETTY GOLDMAN

NEW YORK

PAUSANIAS, DESCRIPTION OF GREECE, Vol. V. Companion volume containing illustrations and index, by R. E. Wycherley. Pp. xviii+272, pls. 85. Loeb Classical Library, Cambridge, Harvard University Press, 1935. \$2.50.

Previous commentaries on Pausanias have been restricted in their illustrations to general maps of the geographical divisions of Greece and detailed ground plans of individual excavated sites and particular buildings. It was an admirable idea to add to these maps and plans a thoughtfully chosen set of photographs. The value of an actual pictorial record of Greek sites to clarify for the reader the description of Pausanias cannot be overestimated. As explained in the Preface, the volume "cannot . . . provide a full archaeological commentary". Its object is "to give a representative selection" to "illustrate the most important sections and enable the reader to follow the rest of the description with greater interest and understanding; and . . . be of some use independently of the author." The plates are accompanied by accurate and brief but remarkably full archaeological accounts, which are gratifyingly up to date, notably for Corinth and Athens, in particular the Agora. It is especially pleasing to find the "Theseum" given what now seems to be its proper identification, the Temple of Hephaistos; but recent investigation may show that the accepted date, given here, is too late.

Commendable also is the selection of numerous illustrations rarely published, e.g., both a plan and a photograph of the sanctuary at Lykosoura, and fine views of the Menelaion at Therapne, the Treasury of Minyas at Orchomenos, the valley of the Styx, and the plain of Stymphalos. Coins are carefully chosen to illustrate sculpture.

A few points call for comment. In the bibliography, necessarily very selective, the second edition of the *Guide to Corinth*, 1933, should have been given and its later plan used for Pl. 16. Kabbadias's Greek work on Epidauros is far more complete than the work by Defrasse and Lechat. The base of the Hermes of Praxiteles is under the statue in the museum, not in place in the Heraeum

as stated on p. 54. The old identification of Eleutheræ is accepted for Pl. 41 instead of Wrede's recent Panakton. In Pl. 50 a slight slip might confuse a reader on the spot: the building called the modern museum is the old guard's house; the museum is out of the picture to the right. On pp. 62 and 154 the Temple of Bassae is given a single Corinthian column. Dinsmoor has shown that there were three; his early date is not accepted, and the old hypæthral theory is suggested. Pl. 67 of Bassae is an old view taken before the cella walls were set up, and Pl. 38 is not a recent one of the Erechtheum. What is usually called the Northwest Wing of the Propylaea as on the plan (Pl. 13) is the North Wing on p. 90. Directions of the compass have been confused on p. 104, where "east" should read "west"; on p. 120 "south-west" is "southeast"; and on p. 122, Taygetos rises to the west, not the east of Sparta. The following slips in references should be noted: p. vii, omit 53 from *Kunstgeschichte*. Seminar, Marburg; 66a should be 66a and b, 63 should be 63b; p. xv, Pls. 11 and 12 should be interchanged and V, x, 5-8 is 6-8; pp. 82, 96, Pl. 12 should be 11; p. 146, Pl. 23 should be 24; p. 18, I, ii, 1 is I, i, 5; p. 20, I, xviii, 2 is 4; p. 30, I, xxiii, 8 is 7; p. 73, X, xiv, 6 is 5; p. 74, I, xxiv, 6 is X; p. 186, III, xix, 1 is 2; p. 188, V, x, 5-8 is 6-8 and xvii, 6-11 is 7-11.

A general Index of the text of Pausanias and a most useful Index of Artists close a thoroughly well organized and convenient companion to the reader of Pausanias at home or to the visitor at the sites.

LUCY T. SHOE

HILLYER ART GALLERY
Northampton, Mass.

THE EXCAVATIONS AT DURA-EUROPOS CONDUCTED BY YALE UNIVERSITY AND THE FRENCH ACADEMY OF INSCRIPTIONS AND LETTERS, Preliminary Report of Fourth Season of Work, Edited by P. V. C. Baur, M. I. Rostovtzeff, and Alfred R. Bellinger. Pp. xvi+290, pls. 26. New Haven, Yale Press, 1933. \$3.00; and Preliminary Report of the Fifth Season of Work edited by M. I. Rostovtzeff. Pp. xi+322, pls. 52. New Haven, Yale Press, 1934. \$5.00.

Much that is new is incorporated in the Fourth Report of the Dura excavations. Architecture is discussed by the field director, Pillet. The study of the Roman triumphal arch, discovered in the preceding year has advanced with the reconstruction of the inscription accomplished by members

Also the name G.
Bequignon" (p. xviii)
must be changed to
Y. Bequignon

of Rostovtzeff's seminary at Yale. The appearance of Trajan's name in this inscription shows that the Romans entered Dura for the first time under this emperor, not under Lucius Verus as had been held previously. The investigation of the fortifications has proceeded and close to their southwest corner has come to light a sanctuary consisting of a portico and several rooms opening on a courtyard which contained three altars and three bases. Pillet infers from the triangular arrangement of these altars that the sanctuary was dedicated to Persian fire-worship. The excavation of the "Temple of the Palmyrene Gods" is now complete and the frescoes are now safe, that of Conon being deposited in Damascus, and that of the Tribune at Yale. The excavation of the palace, or the 'Inner Redoubt,' is also finished. Some features, namely the breadth of the main rooms, their duplication and orientation toward the north and east reveal oriental influence. Pillet's dating of the building to Macedonian times seems doubtful. Private houses with similar broad rooms, some of them with shops and with second storeys, were found. Further evidence of oriental influence is afforded by the use of terracotta plaques as wall decorations and the decoration of voussoirs with busts. Both these features are discussed by Baur, who adds a useful survey of the use of glazed bricks beginning with the Babylonian period.

An altar dedicated to Zeus Betylos is discussed by Seyrig; a number of new Greek inscriptions are published by Little and Rowe. Welles deals with the graffiti, of which those discovered in the house of Nebuchelos are of the greatest importance. They are business transactions scratched on the walls of the office and give us a vivid picture of economic conditions at Dura from 235-240 A.D. Trade was in unguents, wool, barley, and, especially textiles. The prices mentioned show that the inflation which culminated under Claudius Gothicus had not yet begun. The graffiti contained also new names of garments which are a contribution to our knowledge of dress, and new horoscopes. One of the latter proves that the Seleucid Era as employed at Dura began with 312 B.C. as in Syria, not with April, 311 B.C. as in Babylonia. A Persian raid is recorded in 239 A.D. by a text saying, "κατέβη . . . Πέρσης" Two inscriptions in Estrangelo Syriac published by Torrey prove the use of the Seleucid Era as early as the third century A.D.

A fresco representing a battle between Persians and Roman or Palmyrene cavalry gives us a good

idea of Sassanid art. The scene is ingeniously interpreted by Little, although the inscriptions in Pehlevi are difficult and obscure. The most probable assumption is that the battle took place shortly after 256 A.D. and that the two main figures represent Shapor and Valerian. The style is typically Sassanid; the main figures are larger in size than the others, the battle is dissolved into several combats, the flying gallop is represented, the drawing of the figures is flat, the color scheme includes marked contrasts of red and black set side by side. Rostovtzeff deals with the graffiti which represent deities, human beings (mostly horsemen), ships and a caravan of camels, the latter being a new and unique motive. He uses the opportunity to contribute valuable observations about sagitarii, cataphracti, and clibanarii.

Concerning minor finds, Little reports on the pottery and Baur on several other items; worthy of mention are: a silver vase decorated with garlands in repoussée work which dates from the beginning of the third century; a vase of local manufacture (under Alexandrine influence) in the form of a bust representing a negro, probably used, like other similar vases, for storing grains of incense, and made in the second century A.D.; a steatite mould with the bust of Atargatis, of Parthian workmanship under Hellenistic influence; a fragment of Syrian glass in black and gold with the head of Thetis, probably made in Antioch like a comparable glass vase from Kertch representing Daphne, in about 230 A.D. Miss Nettleton publishes jewelry, beads and two Babylonian seals and Bellinger the coins. The earliest coin found so far at Dura was issued at Antioch in 40 B.C.; the gap between this piece and the issues of Septimius Severus is filled by coins of Nero, Galba, Titus and Marcus Aurelius. A short chapter also by Bellinger on "New material for the history of Dura" closes the report.

In the fifth report, the archaeological material predominates, and architecture again plays an important part. We get first more information about the fortifications. The circuit wall is not much later, probably, than the citadel. An earlier construction on the site of the Palmyrene Gate was found. A terminus *ante quem* for the latter, which is contemporary with the circuit wall, is afforded by an inscription of 17-16 B.C. A series of mud walls were erected inside and outside the stone fortifications for the purposes of reinforcement. They covered a couple of sanctuaries and the Christian church which were thereby pre-

served for us. Private houses show distinctively oriental features like winding entrances. Interesting details are screen walls sheltering the kitchen, a transparent piece of mica used for a window, a square basin probably used for a fire box in winter, a niche in a wall with a secret pocket. The agora is now uncovered. Although it was built under the Parthian régime, the layout is unmistakably Greek, following the Hippodamian scheme. Of the shops which lined the streets leading to the agora, however, a number, together with adjacent colonnades and two arches spanning neighboring streets, were erected in Roman times. The occupants of the shops were apparently metal-workers, stone-cutters, jewelers, caterers and pharmacists. A building nearby was identified as a library from the many small niches in the wall of one room. A great bronze foot and a silver crown indicate the worship of Jarhibol in this building. Of great importance is a praetorium. Dura thus affords the earliest example of a Roman *castra stativa* established within the walls of a full grown city. The praetorium follows the usual plan known from Lambaesis and from camps in Germany. Hopkins and Rowell comment on the use of its various rooms and identify a small adjacent building as the schola mentioned by Hyginus. One of the sanctuaries mentioned above as covered by the reinforcements of the city wall was that of Aphlad, a deity probably to be identified with the Assyrian god, Aplada, son of Hadad, connected with the middle Euphrates region. It consists of a series of rooms laid out irregularly around an open court in which were two altars. There were apparently two main chapels, both showing the Oriental type of a broad room, with the entrance in the middle of the long side. Fortunately, a dedicatory inscription mentioning the year 54 A.D. was found. A second sanctuary belonged to Artemis Azzanathkona, probably a form of the great Syrian goddess which retained the name of 'Anath, as Hopkins points out. The ground-plan showing two chief chapels and other rooms as well as a "salle aux gradins" is closely related to the plans of the temples of Artemis and Atargatis. I remarked in my review of the Third Report (*A.J.A.*, 1933, p. 353) that I find this type of shrine more akin to West Oriental than to Mesopotamian sanctuaries, as the excavators hold. The canopy above an altar also has analogies in the West, e.g. at Aatna (*Syria*, XI, 1930, 148). Many inscriptions enable us to trace the growth of the sanctuary by

successive additions of rooms between the years 123 and 161 A.D. Hopkins holds that the Christian church was originally the private residence of a well-to-do citizen, built probably earlier than 232 A.D., a date mentioned in a graffito. It was used as a secret meeting-place for Christians, as we know from literary sources, and had, therefore, one room installed as a chapel. In the time of Septimius Severus, when no concealment was necessary, alterations were made so that the building became exclusively a church.

Among the objects found in the buildings were figures of Hadad, of a deity with a ram, of a female figure with a bird and grapes, of Hercules, who apparently was very popular, and various heads and reliefs. The cult relief in the temple of Aphlad shows the god cuirassed and standing on two eagle-griffins, and nearby a priest in pointed cap offering a sacrifice. In the sanctuary of Azzanathkona also was found an interesting relief; the goddess is seated between two lions and is being crowned by a man taller than herself. The shape of the relief, that of an aedicula with two Corinthian columns, as well as the style are Hellenistic. Among the graffiti and dipinti are representations of the Palmyrene gate, of Jarhibol both singly and in a cult scene, of a sacred bird under a canopy, of two female musicians and of hunting scenes. Hopkins' comments on the subjects, the styles, and various details of these sculptures and graffiti are very illuminating. He traces their relations to the earlier art of Syria and the Hittite countries as well as to that of Palmyra, Byzantium, and Parthia. A sketch of the various trends and of the stylistic development of Eastern art is excellent (Cf. my remarks in the 86th *Berliner Winckelmannprogramm*). Hopkins is also right in noting two types of heads, the round and the oval, both of which are common in the art of the Near East from the earliest times down (Cf. my *Frühe Plastik in Griechenland und Vorderasien*, p. 135).

The inscriptions recovered in this campaign increase our knowledge considerably; those from the temples disclose the history of the leading families at Dura, that of Athenodorus, for example, can be completely reconstructed. Of greatest importance are the inscriptions, graffiti and especially the papyri found on the site of the praetorium, which shed new light on Roman military organization and on the history of the garrison at Dura. A descriptive list of the papyri is given by Silk and Welles. There is a calendar of official festivals, a contract of sale and other legal docu-

ments, two daily registers, muster-rolls etc. Mention may be made of a "sator square" with comments by Rostovtzeff and of two graffiti containing the formula: $\mu\eta\sigma\kappa\epsilon\tau\epsilon$ and $\mu\eta\sigma\kappa\epsilon\sigma\theta\epsilon$, variations of the usual $\mu\eta\sigma\theta\eta$. The inscription on a silver libation bowl dating from 232-233 is likewise published.

Last but not least, Baur deals with the paintings of the Christian chapel, which are well reproduced both in black and white and in four color plates. Baur not only gives a careful and exhaustive description of them, but draws conclusions for the history of Christian art on the basis of this new and inestimably important material, conclusions which will be readily accepted by unprejudiced scholars. We now possess the proof that, although each region had a special repertoire and a distinct manner of representation, no western influence can be traced in the east whereas considerable influence from the east can be traced in the art of Rome. An approximate date for the paintings is afforded by the characteristic head-dress of the two Marys in the scene at the sepulchre. It may be as early as 200 A.D. and certainly not later than 235 A.D.

VALENTINE MÜLLER

BRYN MAWR COLLEGE

THE BUILDING OF THE ROMAN AQUEDUCTS, by *Esther Boise Van Deman*. Folio, pp. xi+440, figs. in text 49, pls. 59. The Carnegie Institution of Washington, 1934. \$9.00.

This sumptuous and scholarly volume may fairly be called a life-work, since its production would have been impossible without the intensive investigation of Roman building materials and methods of construction which its author has carried on for so many years. Everyone will share the regrets which she expresses in her Preface, that it could not have been accompanied by Dr. Ashby's *Aqueducts of Rome*, the appearance of which it is to be hoped may not long be delayed. Dr. Ashby's name appears more than two score times in the Index of this book, often as the discoverer of parts of the aqueducts and again as having identified parts which have since been covered up or destroyed.

The first chapter, after preliminary remarks about the development of water-supply in other ancient lands, gives us a history of the Roman builders of aqueducts from Appius Claudius Crassus, surnamed Caecus, in 312 B.C., after Rome had depended for nearly four centuries and

a half on water from the Tiber, or from wells and springs, to Alexander Severus, in A.D. 226. Among the builders, Agrippa and Augustus have always been conspicuous, and recent investigations have added Hadrian to the list.

In chapters II to XII, the aqueducts and their branches are described in chronological order, their course is traced, so far as that is possible, from their sources to their entrance into the city, and the dates of the various parts are discussed. The Classical References, literary and epigraphic, are not only given in footnotes along with those of the writers, ancient, medieval, and modern who have contributed to the subject, but their text is printed in the seventeen pages of Appendix A. In Appendix B (forty-four pages), the material discussed in chapters II to XII is presented in tabular form in the same chronological order, with the exact location of each of the parts, a brief description of their form and material, their date, where it can be determined exactly or approximately, and the time when they were destroyed, if they are no longer in existence. References are also given to those who have previously described and pictured them.

To say that we have a complete history of the aqueducts and their present condition is to do scant justice to this *magnum opus*, as the reviewer is painfully aware. In spite of its technical character it is written in such a style that it can be read with pleasure as well as with profit by both specialist and layman. It is illustrated with fifty-nine full page plates and forty-nine text cuts, many of which are not only instructive but beautiful pictures. The presswork is of the usual Carnegie excellence, and the proof-reading is all but perfect; Van Buren for Van Buren in the Index supports the statement of a friend and publisher of the reviewer, that no book was ever published without a misprint.

JOHN C. ROLFE

UNIVERSITY OF PENNSYLVANIA

ACCOUNTING IN THE ZENON PAPYRI, by *Elizabeth Grier*. Pp. xiii+77. Columbia University Press, Morningside Heights, New York, 1934. \$3.00.

Zenon of Caunus has become in less than twenty years one of the best known persons of antiquity. One of the many Greeks who came to Egypt under Ptolemy Philadelphus to take part in the exploitation and Hellenization of the kingdom, he became the right-hand man of the great finance minister Apollonius, toured Syria in his interest,

accompanied him on journeys in Egypt, and finally settled down in the Fayûm to develop the village of Philadelphia as a semi-private estate and agricultural experiment station and to leave a vast collection of private papers under the dry sands of the desert as a historical source of the first importance. His archives belong to the period of transition between the little world of the city states and the cosmopolitan culture of the great empires, to the time when Greek was becoming Hellenistic. In such a period, in accounting methods as in larger matters, it is interesting to know what is Greek, what oriental. For this reason, and because these papyri offer what is probably the largest body of material dealing with the business affairs of a single man preserved from antiquity, they have been well chosen by Miss Grier as the first point of attack in her projected study of the ancient methods of accounting, both Greek and Roman.

The handsomely printed little volume consists of six chapters, with a brief bibliography, a glossary of accounting terms, and an index. After a general historical introduction and a brief description of the organization of the Philadelphia estate follow two unpublished accounts from the Columbia collection and a survey of the other Zenon accounts under the two headings, accounts in money and accounts in kind. The general conclusions are presented at the end, that the system of accounting is purely Greek, uninfluenced by Egyptian methods, and that the double entry system of bookkeeping was still unknown.

The volume offers a useful introduction to ancient accounting. It is not intended as a practical guide to the actual texts. Miss Grier is interested in the larger aspects of the accounts, their importance for political or social history and their place in the development of business methods in general. She does not give a classified catalogue of the accounts from the Zenon archives, does not list abbreviations or symbols, or discuss specific difficulties which confront readers in this field. It is true that her terms and classifications will not always be clear to a non-economist, while her conclusions seem, on the basis of this volume alone, somewhat summary. Probably, however, more precise and detailed analyses will form part of the larger study in prospect, to which one will look forward with great interest.

A word may be added in detail concerning the publication of the two Greek texts in Chapter III, accounts of disbursements to persons on the estate,

the first of money and grain, the second of grain only. The texts are printed without punctuation, accents, or breathings, a "severe" style which belongs to the early days of papyrology, and which must be deprecated. Eccentricity is shown in the use of diacritical marks: thus in *P. Col. Inv.* 211, l. 35, <αὐτό> is for {αὐτό} (an exclusion by the editor), in ll. 33 and 38 of the same text, single square brackets (the mark of a lacuna) are used for double square brackets (an erasure by the scribe). The value of these signs has been standardized, and there is no reason to depart from them. Occasionally the syntax of the accounts has not been considered. So in *P. Col. Inv.* 249, l. 20, etc., 'Ὡφελίων (δραχμαὶ) β' can hardly be right, whatever verb (ἔλαβεν, ἐδέξατο) be supplied, and δραχμαὶ must be δραχμαί. Again in *P. Col. Inv.* 211, l. 40, the plural verb in (γίνονται) (τετρώβολον) should be singular, γίνεται. More important are some misprints (found also in the references in the glossary) and confusions. The note on *P. Col. Inv.* 211, l. 41, gives the total of the account correctly as 3 drachmae 2 obols, but the translation has 3 drachmae 3 obols. On the other hand, in ll. 37-41 of the same text it is the translation which is correct. Immediately before (ll. 35-36) is given a total, 35 choinices of wheat, 5 choinices of flour: that is, 40 choinices or one artabe in all. The text reads (disregarding the diacritical marks and a five times repeated tetrobolon sign): τὸ πᾶν γίνεται ἀρτάβη α' ἥς τιμὴ δνόβολοι ἡμισν, κάτεργον ὀβολὸς ἡμισν, γίνεται τετρώβολον. This is translated correctly: "The whole amount total (better 'totals') 1 artab at the price of 2½ obols, for crushing (τὸ κάτεργον means of course literally 'the labor cost') 1½ obols, total 4 obols." The note, however, assumes that τὸ πᾶν refers only to the flour, and states: "The 5 choinikes of flour were valued in money, at the price of 2½ obols or ½ obol per choinix."

C. BRADFORD WELLES

YALE UNIVERSITY

ANCIENT SYNAGOGUES IN PALESTINE AND GREECE, by E. L. Sukenik. THE SCHWEICH LECTURES OF THE BRITISH ACADEMY, 1930, London, Published for the British Academy by Humphrey Milford, Oxford University Press, Amen House, 1934.

The study of ancient Jewish synagogues has acquired a new importance for archaeology. In the past decade several synagogues have been un-

earthed; outstanding among them are those of Dura, excavated by Yale, and Beth Alpha, by the Hebrew University. A survey and summary of the results of the excavations of these places of worship has been admirably made by Dr. Sukenik who has conducted the excavations at Beth Alpha. In his short treatise he sums up the discoveries of the synagogues of Palestine at Capernaum, Chorazim, Kefar Birim, Naaran, Beth Alpha and Jerash; and those of Greece at Delos, Miletus, and Priene.

The Ark of the Law in the first centuries of our era was a portable chest, and later found a permanent place in an apse or niche. The Ark is traditionally represented on glassware from the catacombs and other early ornamentations as having panelled double doors. On the mosaics of the synagogues, and on the above mentioned objects, the Ark is flanked by two seven-branched candlesticks. The veil in the ancient synagogues was hung in front of the whole apse. Ornamented marble screens, like the iconostasis, separated the recess of the Ark from the worshippers. The Bema, platform, was usually made of wood. A stone Bema, not in the directions of the axis of the synagogue was found in Beth Alpha, built at a later date. The Seat of Moses was reserved for the elder of the synagogue. The motives used for synagogue decoration are Biblical, astral (zodiac), magical, and prophylactic. The inscriptions are in Aramaic and Greek.

An appendix of a few pages is added to the book mentioning some of the latest excavations, such as the synagogues of Stobi in Yugoslavia; Hammath-by-Gedera in Transjordan; the one already referred to in Dura-Europos, and the synagogue at Esfia on Mount Carmel. As a further aid in understanding the text, Dr. Sukenik has added eighteen plates of illustrations. Of special interest is the map of Palestine indicating places where remnants of ancient synagogues have been found.

The origin of the synagogue most likely belongs to the Exilic Period in Babylonia. The first half of the fourth century which is set, on the basis of a quotation in the Talmud Yerushalmi, as *terminus a quo* (p. 28) for the time of mosaics with living creatures, could be shifted back to the end of the third century. This date must be likewise considered only with regard to mosaics in Palestine. In Babylonia, however, mosaics with living creatures were undoubtedly in use before, from which country they were perhaps introduced. The Dura synagogue shows that murals, having the

same legal status as mosaics, existed in Babylon as early as the middle of the third century, and possibly before, taking into consideration the composition of the murals.

From another passage in the Yerushalmi, it may be inferred that murals were permitted in Palestine in the time of R. Johanan, middle of the third century.

Dr. Sukenik's book, which shows keen understanding of the subject, is a valuable contribution to the study of the archaeology of ancient synagogues. It may also serve the layman as a comprehensive guide.

PAUL ROMANOFF

MUSEUM, JEWISH THEOLOGICAL
SEMINARY OF AMERICA

LA BASILICA DI AQUILEIA: by *M. Paschini, Leicht, Vale, Cecchelli, Forlati, Morassi, and Cirilli*. Pp. 386 and index, 107 plates. Bologna, 1933. 400 lire.

GLI SCAVI DI AQUILEIA: by *G. Brusin*. Pp. 245 and indices, 147 figures in text, 6 plates of plans folded at rear. Udine, 1934. 80 lire.

Rebirth of scholarly interest in Aquileia in the past generation has been largely concerned with the remains of Early Christian construction and decoration which excavators have brought to light beneath the present basilica. These remains form the major concern of the first volume cited above. It has clearly been the aim of the editors to present their subject, the basilica of Aquileia, not merely as an archaeological problem of limited scope, but as a living organism as well, reflecting in its more than 1600 years of Christian tradition, the endless growth and change of artistic fashions, the developing needs of the church, the repeated alternations of prosperity and decline. To this end, the central chapter by Carlo Cecchelli, dealing with the remains of Aquileia's earliest places of Christian worship, has been supplemented by a series of secondary articles which present as much as possible of the basilica's historical and religious environment. These comprise chapters by Paschini on the history of a church that in the fifth and sixth centuries, and again in the eleventh, ranked in Italy as second only to Rome; by Leicht on civic life in the mediaeval city; by Vale on the liturgy peculiar to the Aquileian church until the end of the sixteenth century; by Vale again on the history of its patriarchal treasury, and the objects therein contained; by Morassi on sculpture and paintings within the basilica. The center of

interest is bracketed by two chapters which trace the growth of the basilica from parallel points of view: by Forlati an analysis of actual construction within the enceinte; by Vale a résumé of documentary evidence.

The kernel of the volume, Cecchelli's 165 pages, begins with an account of the progress of excavation on the site, and presents a lengthy bibliography. The latter may be condensed into two publications which give the sum of previous effort: *Der Dom von Aquileia*, Wien, 1906, with the results of the earliest excavation, carried out by Niemann and Swoboda under the auspices of Count Lanckoronski; and an article by Gnirs, noting the work of a later period, in the 1915 *Jb. d. Kunsthistor. Inst. der k. k. Zentralkommission f. Denkmalpflege*. From this generation of excavation has resulted a fairly complete picture, at least in plan and decoration, of an early fourth century basilica; extensive indications of its successor of perhaps the fifth; and suggestions that there existed at least one later church on the site before the erection of the present building in 1031.

The complex of fourth century construction lies at a depth of some 2 meters below the floor of the existing basilica. It consists of two rectangular halls of approximately the same size and of similar plan, set parallel and sharing common end walls. The southern lies under part of the present church, and is preserved almost intact in plan; the northern is half obliterated by the foundations of the present campanile. The area between, roughly square, is filled with secondary rooms. Entrance to the complex proceeds from a street on the east, through this central area, to a narthex against the western wall which joins the two halls. Careful examination reveals in this plan two or three periods of construction, extending over a generation or more. Two dedicatory inscriptions and a changing quality of mosaic technique suggest a dating sequence. The earliest basilica seems to have comprised the two eastern bays of the north hall, where the floor mosaics are finest. The larger southern hall (area c.37 by 20 meters) doubtless reflects a congregation doubled in number by new converts after Constantine's edict of tolerance. With this second period of building, the older north basilica was enlarged to balance the new, being still in use for some secondary religious purpose.

Primitive characteristics in this plan are the absence of any apse, and the almost clandestine entrance. Circulation is well developed within the

group, with three doors opening across the full width of the narthex into the southern church; the passage from narthex to street, however, is so little emphasized that it has not yet been distinguished from the confusion of intermediate rooms. Both basilicas are divided by interior supports into nave and aisles, and in each the chancel area is definitely marked. Fragments found in the debris indicate ceilings of painted stucco, ordinarily backed by beams, but above the south chancel apparently supported by a light brick vault. The walls are preserved high enough to show the beginnings of painted decoration. This in the earlier church is a simple imitation of marble panelling; the southern is spaced with painted columns, and between these shows a perspective balustrade with gardens behind.

The most remarkable feature of this fourth century group is its elaborate system of floor mosaics. This is best seen in the southern church, where damage is least. The layout follows the longitudinal and transverse axes of the interior columns to form 9 rectangular bays in the public area; the chancel is treated as a single large panel. Here the mosaics present a seascape with the story of Jonah in picturesque style; elsewhere the patterns are predominantly geometric. Some are abstract throughout; others fill their largest medallions with figures of animals, birds, fish, sprays of foliage, or human beings. Obvious Christian symbolism is confined to a figure of the Good Shepherd and to the nave bay nearest the chancel, the figures of which seem to allegorize the Eucharist. The date of this early complex hinges on an inscription in the south chancel mosaic, stating that the church was made and dedicated by Theodore (the bishop who went as Aquileia's representative to the Council at Arles in 314).

The third basilica was erected on the site of the old north hall, with a floor more than a meter higher, and a greatly enlarged plan extending far beyond the old chancel to the east, and well over the old narthex to the south. Here also the floor is covered with mosaics, now divided into bays along the longitudinal axes of the columns; on the east, the place of the altar *mensa* is marked curiously as a raised area, approached from the nave by a raised path. Execution of the mosaics is cruder throughout, and the later artist betrays his weakness by the omission of all but floral and geometric forms from his repertory. No date for this third church is yet more than conjectural. Its considerable difference in level, the decline in

mosaic technique, and the comparative flimsiness of construction, make a period close to that of the earlier work unlikely. It has been suggested, most recently by Brusin (whose 1934 volume, to be discussed below, contains a chapter bringing this portion of the excavations up to date) that the Theodosian edict of 392 placing an imperial ban on paganism might well have caused such a flood of converts as to make a basilica larger than the southern imperative. This theory of simple growth agrees with the lack of any sign of violence in the earlier complex. The mosaics of this third period parallel in style other floors of the late fourth or early fifth centuries in Istria; on their level was found a cache of coins, the latest of Gratian (375-83).

The débris of the third basilica shows evidence of its destruction by fire, doubtless in the sack of the city by the Huns or during the Lombard invasion. In subsequent construction the northern site was abandoned, and a return was made to the southern. When this was done and why, and what buildings intervened between the third basilica and that of the eleventh century, are problems for which the evidence is as yet too meagre to support more than hypotheses. It seems certain that at least one church of closely similar plan preceded the Romanesque of 1031 on the southern site; the latter's foundations are in material and execution distinct from the rest of its masonry.

Definite evidence exists, furthermore, of a building period probably subsequent to that in which the third church was raised. This appears in an area in front of the present basilica and extending beneath its porch. It is intimately connected with the existing baptistery, which by a vagary of plan lies on the axis a short distance in front of the west façade, and connected with it by a narrow vaulted passage. This baptistery has been altered, but its core is older than the Romanesque church. On a level with its floor (slightly higher than that of the third basilica, approximately a meter lower than that of the present) has been discovered a large area of mosaic, presumably contemporary. This surrounding floor represents, to Forlati, a westward extension of the contemporary church to include the baptistery within its walls. An approximate date for this development is given by the style of the mosaics, which tally closely with sixth century work in Grado, Parenzo, and Ravenna. In agreement here is an old tradition of the Aquileian church, which speaks of a splendid restoration in 538, effected

through the generosity of the Imperial Legate Narses. This date is nearly a terminus. The Lombard invasion ten years later drove the patriarch and his chapter into exile at Grado, and seems to have left the city desolate until a Carolingian revival.

Evidence for a ninth century rebuilding of the basilica is chiefly that given by an order of Charlemagne to the patriarch Maxentius, expressing his wish to restore the ancient glories lost through barbarian perfidy. As possible corroborations stand a series of capitals, those of the present crypt and three in the atrium, which are neither late classic, Revennate, nor remotely like the Romanesque Capitals of the nave.

Much of the Aquileian church as it stands today is a result of the great surge of building activity in the early eleventh century, when the patriarchate was rising toward the summit of its good fortune as a vassal of the Ottonian emperors. Lack of space forbids more than the briefest notice of this great basilica, for all its historic interest. Much of the Romanesque church was destroyed by an earthquake in 1348; the latter part of that century witnessed a rebuilding in Gothic forms, the last important change in the architecture. Succeeding centuries, doubtless because of the ever increasing poverty of the diocese, contributed only decorative additions or repairs.

Important paintings within the present church are the Romanesque frescoes of the apse (contemporary with the dedication of the building, since they show among imperial German donors the great patriarch Poppo with a square nimbus) and an elaborate decoration of the crypt in a provincial Byzantine style of the twelfth century. Here is emphasized the position of mediaeval Aquileia at a crossroads of artistic and political influence; the lower courses of the crypt, under the Byzantine saints and scenes of the Passion, are painted in a curtain pattern, across whose folds move small figures in outline, vivacious northern drawings with no touch of eastern inspiration. The great apse fresco is remarkable as an iconographic rarity, showing in a mandorla surrounded by the Four Beasts, not the Christ of the Ascension, but the Virgin and Child.

Sculpture of the Romanesque period is confined to the nave capitals, careful imitations of a Corinthian model. Their re-use in the fourteenth century arcade has added Gothic impost blocks above, elaborate with floral and figure motives.

Sarcophagi and other sculptures of the Gothic period show influences variously from Venice and from the north. The chief additions of the Renaissance are a ciborium and crypt entrance in the Lombard style of the outgoing Quattrocento, and a large Bellinesque polyptych of 1503, by Pelligrino di San Daniele, of Udine.

Gli Scavi di Aquileia is concerned largely with excavations undertaken outside of the basilica enceinte between 1929 and 1932, in order to determine as much as possible of the layout of the Roman city. The work accomplished has been concentrated on a sector to the north of the basilica, where 19th century investigation had located an eastern city wall; here the progress of the dig has revealed the often erroneous character of earlier theories of the city's plan (as culminating, for example, in the "Aquileia zur Römerzeit" of E. Maionica, *Annuario del Ginnasio dello Stato di Gorizia*, XXXI, 1881). The results present a vivid picture of the vicissitudes of fortune in the Roman world. Aquileia as a colony of the Roman republic was long an outpost in the midst of hostile tribes, and must have been fortified strongly; votive inscriptions, apparently of the first century B.C. speak of the restoration of gates and walls. To this period, therefore, has been ascribed a well built wall of brick, traced through much of its course on the east and north, and showing by its changes of direction the limits of the early metropolis. This wall was demolished with care, apparently because it impeded the growth of the city in a later period of peace and commercial expansion; indeed the historian Herodian, writing of third century wars, expressly states that the most ancient defenses of Aquileia had been largely destroyed for lack of any need of their protection.

The golden age of Aquileia as a Roman port is illustrated by elaborate commercial works dating probably in the first century of the empire: along the west bank of a tidal stream, roughly parallel to the republican walls, a finely built stone quay, with mooring blocks for small vessels, well-paved approaches from the city, and a system of warehouses behind. The usefulness of this water approach was apparently of brief duration, however. Toward its decline two main factors seem to have contributed: the drying up of the stream, and the threat of war. Aquileia was besieged in 169 A.D. by the invading Quadi and Marcomanni. To this emergency is ascribed a wall thrown up in evident haste along the water-front, and resting in part

on the stone quay. The city was attacked again in 238 by Maximianus, and in 361 by Julian; it was sacked in the fifth century by Attila, and sacked again in the sixth by the Lombards. To this period of alarms and excursions belongs a confusion of walls and towers built of the most heterogeneous materials, sculptured cornices, capitals, epitaph slabs, broken sculptures in the round, or fragments of terracotta. These *disiecta membra* are occasionally valuable in dating the fortification of which they are a part; thus one wall contains a slab with an epigraph in honor of Valentinianus II, Theodosius, and Arcadius, which must date from 383-92.

Incidental results of excavation within the Roman city and in the area to the south of the basilica which formed the castle of the mediaeval patriarchs, form a confused series of walls, portico bases, paved streets, and mosaic floors. Separate catalogues list the various objects found in these areas and in the much pillaged ancient cemetery, under the headings of epitaphs, remains of architecture, fragments of figure sculpture, inscribed bricks and tiles, terracotta vessels and lamps, small metal objects and coins. The few Corinthian capitals published in photographs furnish an apt commentary on the shift in cultural predominance within the Roman empire in its first three centuries. The earliest are the conventional Roman type of Augustus, here, as at Baalbek, an index of the tremendous expansive power of imperial standards in the *Pax Augusti*. Later examples, on the other hand, are unmistakably eastern in form, and one is close to the type of Diocletian's palace at Spalato.

ALEXANDER COBURN SOPER, III
PRINCETON UNIVERSITY

THE MONASTERIES OF THE WÂDI 'N NATRÛN —

Part III. THE ARCHITECTURE AND ARCHAEOLOGY by *Hugh G. Evelyn White* and *Walter Hauser* (editor) (volume VIII of the publications of the Metropolitan Museum of Art Egyptian Expedition under the general editorship of Albert Morton Lythgoe). xxiv+272 pp. +93 pages of collotype plates. New York, 1933. \$15.00.

This beautiful book owes its publication to the generosity of Mr. Edward S. Harkness, and is worthy of its patron. Mr. Hauser, in editing, reduced the manuscript by one-third, but left an ample volume which will serve as a mine of information concerning the venerable group of ten

or more institutes which have flourished in the Wādi Natrūn. The long history of these monasteries, stretching back in some cases to the fourth century, is well organized, and the scattered data concerning their many buildings is brought together and analyzed without any wearisome insistence or pedantry. It is rendered accessible by copious indices, a full chronological table, a glossary, and three lucid chapters of "prologomena." The same lucidity of arrangement is to be found in the plates, where there is a sufficient number of general plans and views to make the numerous detailed views understandable. The quality of the drawing, photography, and reproduction is very high; the collotypes are among the finest which have appeared in recent years.

The study of these old monastery buildings is of interest not so much for the jumbled wrecks which remain as for what they indicate regarding Christian antiquities in Egypt. But for disruptive effect of the early heresies and the staggering blow administered by the Mohammedan conquest, the Church in Egypt might well have produced a half Byzantine, half Romanesque architecture which, with its attendant decoration, would have held a very high place in Christian art. Although the basilican style is better studied in the ruins near Sohag, the Wādi Natrūn monasteries show something of its interesting character and give a hint also of what a great Egyptian vaulted church style would have been like. A considerable number of cult objects, carvings in wood and stone, inscriptions, and paintings are preserved in the Wādi Natrūn. Proper attention is given to all of these details, but the larger part of the book is concerned with the buildings of the principal monasteries—those of St. Macarius, Anba Bishōi, the Syrians, and El Baramūs. Mr. Evelyn White establishes beyond question the fact that there are but slight traces of works earlier than the ninth century, when the monasteries were secured against the desert Arabs by walls, and characteristic fortified towers, each with its chapel of St. Michael, were developed. The question of influences extending from Egypt to the West is not taken up. One feels a kinship with certain Isidorian and Gallican forms, but the data are as yet too uncertain to permit generalization.

KENNETH CONANT

HARVARD UNIVERSITY

DIE BROTVERMERHUNGSKIRCHE VON ET-TÂBGA
AM GENESARETHSEE UND IHRE MOSAIKEN

(Collectanea Hierosolymitana Veröffentlichungen des Orientalischen Instituts der Görresgesellschaft in Jerusalem, Band IV) by *Alfons M. Schneider*. Pp. 79, figs. in text, 18, pls. 39. Paderborn, Schönigh, 1934. RM 4.80.

An interesting church has recently been laid bare on the Sea of Genesareth by Drs. A. E. Mader and A. M. Schneider of the Orientalisches Institut der Görresgesellschaft. The modern name of the exact spot, Et Tâbga, is a corruption of the Greek word, *heptapegon*. Although the ground plan has been made slightly irregular because of the presence of the ancient road to Capernaum, it is a basilica with a three aisled nave, a shallow apse, transepts, narthex, and atrium with super-numerary rooms for the administration of business and the entertainment of pilgrims. Such a ground-plan represents a mixture of Eastern and Western elements which Dr. Schneider considers characteristic of Palestinian architecture (p. 39). A picture in mosaic of a basket of loaves marked with crosses and two small fish behind the central altar serves to identify the basilica as the church commemorating the spot where Christ performed the miracle of the loaves and the fishes.

The first chapter deals almost exclusively with architectural data. Plans and line drawings serve to clarify the text, although the author does not rely on them to make his meaning clear. The chronology is more difficult to follow. In spite of capitals of a second century style, an ascription to so early a date is inconceivable for such a church. The earliest literary allusion is a reference in Paulus Diaconus (12th century) which can be traced back to the *Peregrinatio Aetheriae* which belonged to the end of the fourth century. Since the basilica was already well known, it must have been built at least as early as the middle of the century. The literary evidence is well set forth in the second chapter. Inscriptions in the mosaics reveal a renovation toward the end of the fifth century. The church was destroyed or abandoned at the time of the Arab invasion. Although there is evidence that some of the rooms were used for dwelling purposes for a time after this, none of the fragments of pottery attest a long occupancy.

A description of the separate mosaics comprises the third and last chapter. Important as these are to the history of the art of mosaics, it is possible in a brief review to mention only a few points of major interest. A simple scale pattern laid entirely in white tesserae with a red lily at the base of each

scale paves the vestibule of the presbytery, which bears only slight traces of its original mosaic. The pattern of the central nave, to depart somewhat from Dr. Schneider's order, belongs to the same tradition. A reticulate of carefully arranged flower petals forms the background for wide-opened four-petaled flowers. These floral patterns become common at Antioch in a later period. The mosaics of the transepts and of the spaces between the columns in the nave, though contemporaneous with the others, follow a different school. In the left transept, a frame of lotus buds encloses a series of land and water birds and plants, each laid for its own sake without any attempt to produce a composite whole. A grave monument of Palestinian type, a bit of a city wall, and a pavilion are the only indications of the presence of man. Birds nestle in the Indian lotus flowers. Reeds, oleanders, and other plants seem merely to fill the vacant spaces. A water bird struggling with a sea serpent adds a touch of drama to the whole. The mosaic of the right transept is in every way a companion piece with the same border, the same birds, and the same plants. The snake motive reappears, although this time a bird has aroused a serpent so small that it is coiled in a lotus bud. A tower marked with Greek numerals from 6-10 seems to Dr. Schneider to represent a Nile meter. The somewhat humorous scenes between the columns belong to the same style as the more elaborate mosaics of the transepts. These mosaics

belong beyond a doubt to the original building period.

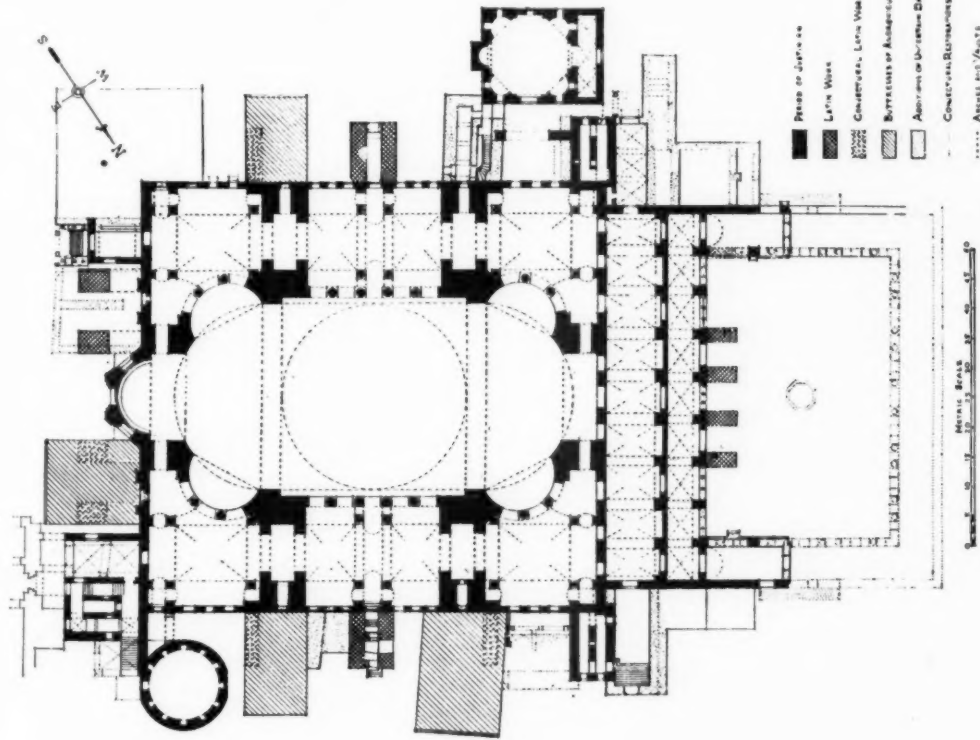
Repairs in these floors give evidence that the mosaic of the North nave, an uninteresting reticulate with open squares, belongs to the second period. A mosaic inscription near the altar has been convincingly restored by Dr. Schneider to contain the name of Martyrius who was patriarch from 478 to 486, a date to which palaeography offers no obstruction. A second inscription in a renovated portion of the border of the mosaic of the left transept belonging to the same general period proves that various philanthropically inclined individuals had a share in the repairs. It seems most natural to suppose that the somewhat coarse geometric designs of the rooms on either side of the apse, of the narthex, and of the atrium belong also to the fifth century.

Local stones furnish the usual shades of gray, red, yellow, and white. Blue and green are entirely lacking, and there is no mention of the use of glass or glass paste. The shades are well blended in the pictures to give rich plastic effects.

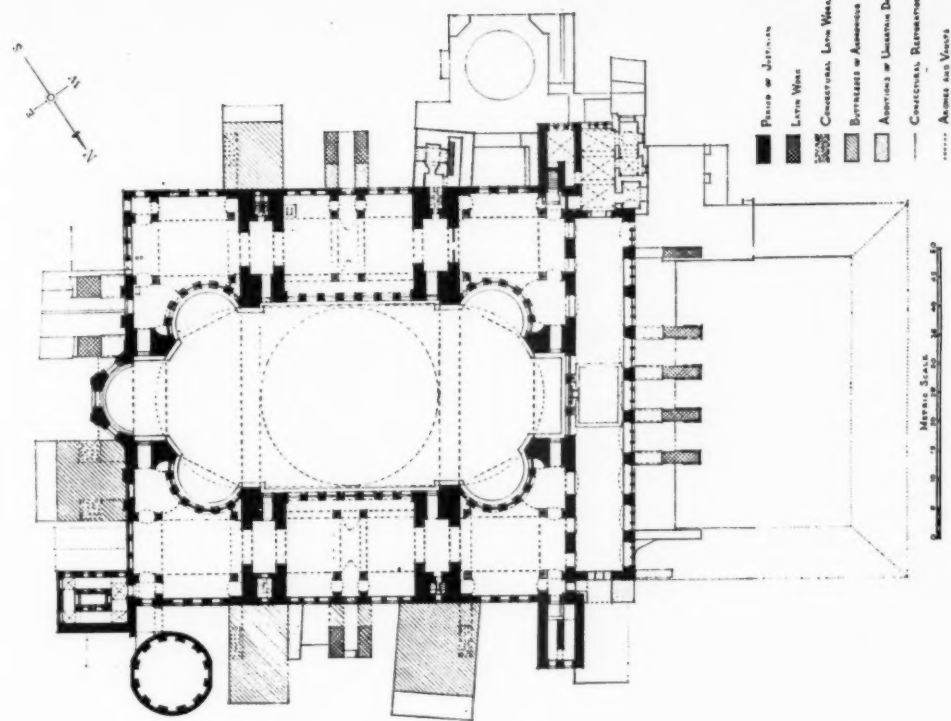
The article is well documented and well illustrated. The photographs of the mosaics are especially clear. Dr. Schneider has made a real contribution in this careful and scholarly piece of work to the history of the basilica and of the art of mosaic in the fourth and fifth centuries.

MARION E. BLAKE

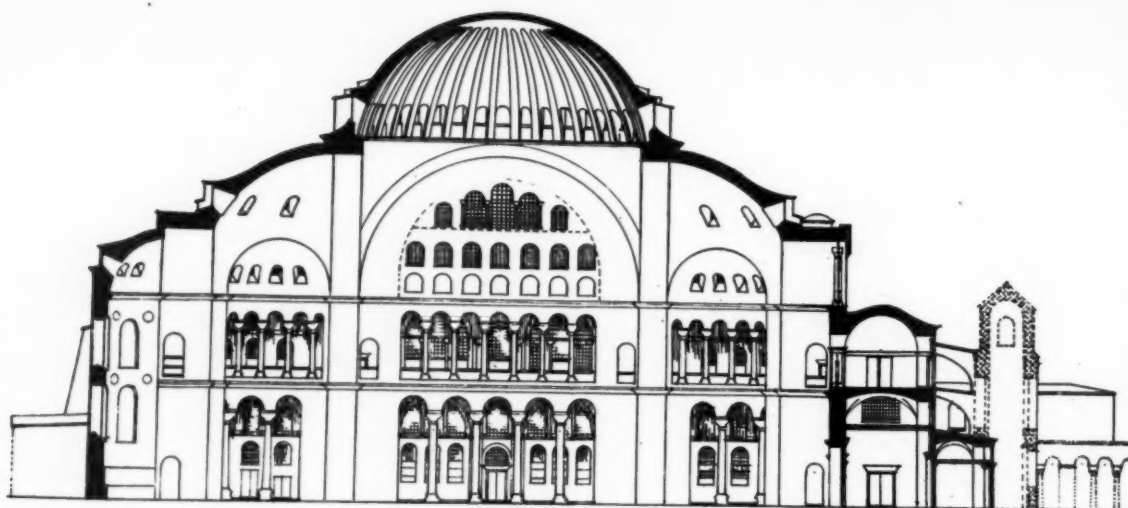
MOUNT HOLYOKE COLLEGE



A.—HAGIA SOPHIA. GROUND PLAN



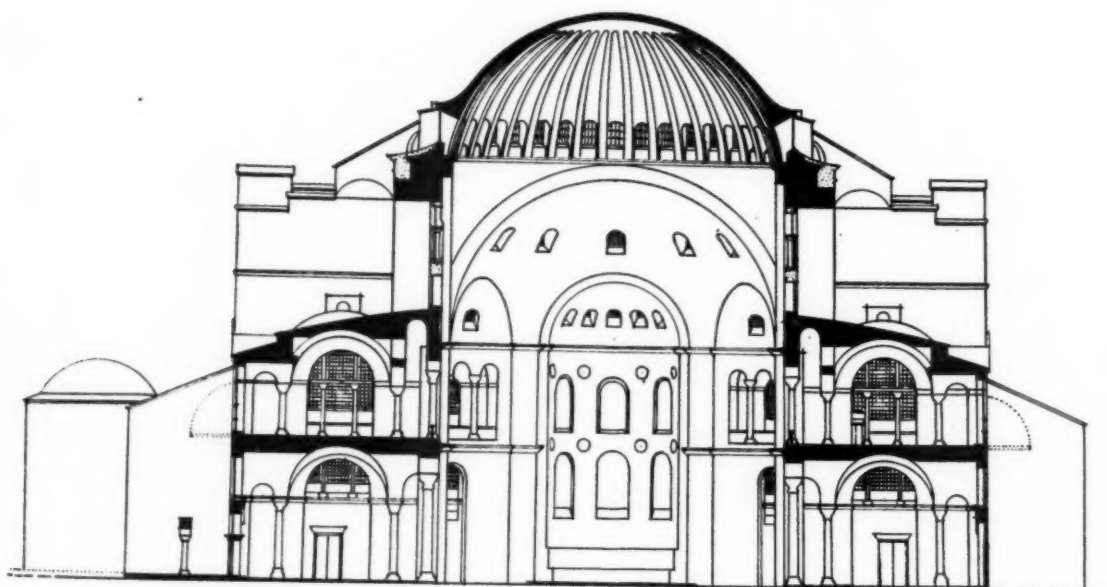
B.—HAGIA SOPHIA. PLAN AT TRIFORIUM LEVEL



METRIC SCALE
0 5 10 15 20 25 30 35 40 45 50

■ PERIOD OF JUSTINIAN - - - - - CONJECTURAL RESTORATIONS ▨ CONJECTURAL LATIN WORK.

A. — HAGIA SOPHIA. SECTION ON EAST-AND-WEST AXIS



METRIC SCALE
0 5 10 15 20 25 30 35 40 45 50

B. — HAGIA SOPHIA. SECTION ON NORTH-AND-SOUTH AXIS

PLAN OF WALLS AT LEVEL -585 TO -700
E-S





A. DEDICATION TO ZEUS HERKEIOS



B. DEDICATION TO CONSTANTINE II AS CAESAR

PLATE L

32

